

**Austin Central Library & Related
Improvements**
Submittal Transmittal
Detailed by Each Transmittal

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Qty	Submittal Package No	Description	Due Date	Package Action
1	0003 - 08 11 18 (JV2) - 0	Custom Fabricated Steel Doors & Frames O&M		

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Items	Qty	Description	Notes	Item Action
0001		Custom Fabricated Steel Doors & Frames		

Cc:	Company Name	Contact Name	Copies	Notes
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Remarks



Signature

5/31/17

Signed Date

Detailed Tracking Form

Hensel Phelps

Austin Central Library O & M Manuals

Florida Glass systems installed;

1. Kawneer 1600UT Curtain wall
2. Kawneer VG 451 storefront
3. Kawneer Doors and Hardware
4. Dow sheet Silicone membrane.
5. Dow Structural silicone
6. Dow Expandable foam
7. Viracon Insulated Glass
8. Truelite Tempered Glass and Mirrors
9. Jockimo Bridge Glass
10. TGP fire glass
11. Custom Steel Doors and frames
12. Tormax Auto operators
13. Rixon Floor closures
14. Northern Star Vent actuators
15. United Sky Skylights
16. Alucoil ACM
17. Bendheim Back painted Glass

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Division 08

- 08 11 18 - Custom Fabricated Steel Doors and Frames
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- 08 63 00 – Metal Framed Skylights
- 08 71 00 – Finish Hardware
- 08 83 00 – Mirrors

Section 1

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08 11 18 Custom Fabricated Steel Doors and frames

1. Includes Stainless Steel Cleaning, Care, and Maintenance. 6 pages
2. Tormax IMotion 1401 ADA operator / closure. 18 pages
3. Rixon Floor closures. 20 pages
4. Von Duprin 35A series Rim Exit devices. Service manual 16 pages
5. Interlux Schooner varnish on Mesquite wood panels. 2 pages
6. Florida Glass Stainless Steel Doors and frames. Details 4 pages
7. Tormax Owners Manual. 9 pages

Stainless Steel - Cleaning, Care and Maintenance

Sponsored by [Atlas Specialty Metals](#)

Jan 11 2002

Topics Covered

Background

Why Maintenance is Necessary

Maintenance During Installation

On Going Maintenance

Good Housekeeping During Manufacturing

Cleaning Methods

Passivation Treatments

Pickling Treatments

Precautions

Acids

Solvents

Chlorides

Background

The attractive and hygienic surface appearance of stainless steel products cannot be regarded as completely maintenance free. All grades and finishes of stainless steel may in fact stain, discolour or attain an adhering layer of grime in normal service. To achieve maximum corrosion resistance the surface of the stainless steel must be kept clean.

Provided the grade, condition and surface finish were correctly selected for the particular

service environment, fabrication and installation procedures were correct and that cleaning schedules are carried out regularly, good performance and long life will be achieved. Frequency and cost of cleaning of stainless steel is lower than for many other materials and this will often out-weigh higher acquisition costs.

Why Maintenance is Necessary

Surface contamination and the formation of deposits are critical factors which may lead to drastically reduced life. These contaminants may be minute particles of iron or rust from other non-stainless steels used in nearby construction and not subsequently removed. Industrial, commercial and even domestic and naturally occurring atmospheric conditions can result in deposits which can be quite corrosive. An example is salt deposits from marine conditions.

Working environments can also create more aggressive conditions, such as the warm, high humidity atmosphere above indoor swimming pools. These environments can increase the speed of corrosion and therefore require more frequent maintenance. Modern processes use many cleaners, sterilisers and bleaches for hygienic purposes. All these proprietary solutions, when used in accordance with their makers' instructions are safe, but if used incorrectly (e.g. warm or concentrated) can cause discolouration and corrosion on the surface of stainless steels. Strong acid solutions (e.g. hydrochloric acid or "spirits of salts") are sometimes used to clean masonry and tiling of buildings but they should never be permitted to come into contact with metals, including stainless steel. If this should happen the acid solution must be removed immediately by copious water flushing.

Maintenance During Installation

Cleaning of new fabrications should present no special problems, although more attention may be required if the installation period has been prolonged. Where surface contamination is suspected, immediate attention to cleaning will promote a trouble-free service life. Food handling, pharmaceutical and aerospace applications may require extremely high levels of cleanliness.

On Going Maintenance

Advice is often sought concerning the frequency of cleaning of products made of stainless steel, and the answer is quite simply "clean the metal when it is dirty in order to restore its original appearance". This may vary from once to four times a year for

external applications or it may be once a day for an item in hygienic or aggressive situations. In many applications the cleaning frequency is after each use.

Good Housekeeping During Manufacturing

Stainless steel can be contaminated by pick-up of carbon steel ("free iron") and this is likely to lead to rapid localised corrosion. The ideal is to have workshops and machinery dedicated to only stainless steel work, but in a workshop also processing other steels avoid pick-up from:

- Tooling used with other metals
- Grinding wheels, wire brushes, finishing belts
- Steel storage racks
- Contamination by grinding or welding sparks
- Handling Equipment
- Adjacent carbon steel fabrication

Cleaning Methods

Stainless steel is easy to clean. Washing with soap or a mild detergent and warm water followed by a clean water rinse is usually quite adequate for domestic and architectural equipment. An enhanced appearance will be achieved if the cleaned surface is finally wiped dry. Specific methods of cleaning are as in Table 1.

Sections below give passivation treatments for removal of free iron and other contamination resulting from handling, fabrication, or exposure to contaminated atmospheres, and pickling treatments for removal of high temperature scale from heat treatment or welding operations.

Passivation Treatments

- Grades with at least 16% chromium (except free machining grade such as 303), 20-50% nitric acid, at room temperature to 40°C for 30-60 minutes.

- Grades with less than 16% chromium (except free machining grades such as 416), 20-50% nitric acid, at room temperature to 40°C for 60 minutes.
- Free machining grades such as 303, 416 and 430F, 20-50% nitric acid + 2-6% sodium dichromate, at room temperature to 50°C for 25-40 minutes.

Pickling Treatments

- All stainless steels (except free machining grades), 8-11% sulphuric acid, at 65 to 80°C for 5-45 minutes.
- Grades with at least 16% chromium (except free machining grades), 15-25% nitric acid + 1-8% hydrofluoric acid, at 20 to 60°C for 5-30 minutes.
- Free machining grades and grades with less than 16% chromium such as 303, 410 and 416, 10-15% nitric acid + 0.5-1.5% hydrofluoric acid, at 20 to 60°C for 5-30 minutes.

"Pickling Paste" is a commercial product of hydrofluoric and nitric acids in a thickener - this is useful for pickling welds and spot contamination, even on vertical and overhanging surfaces.

Table1. Methods of Cleaning Stainless Steel

Routine Cleaning All finishes	Soap or mild detergent and water (Preferably warm)	Sponge, rinse with clean water, wipe dry if necessary. Follow polish lines.
Fingerprints All finishes	Soap and warm water or organic solvent (eg acetone, alcohol, methylated spirits)	Rinse with clean water and wipe dry. Follow polish lines.
Stubborn Stains and Discolouration. All finishes.	Mild cleaning solutions, eg. Jif, specially stainless steel cleaners.	Use rag, sponge or fibre brush (soft nylon or natural bristle. An old toothbrush can be useful). Rinse well with clean water and wipe dry. Follow polish lines.
Lime Deposits from Hard Water.	Solution of one part vinegar to three parts water.	Soak in solution then brush to loosen. Rinse well with clean water.

Oil or Grease Marks.	Organic solvents (eg. acetone, alcohol, methylated spirits, proprietary "safety solvents"). Baked-on grease can be softened beforehand with ammonia.	Clean after with soap and water, rinse with clean water and dry. Follow polish lines.
All finishes.		
Rust and other Corrosion Products.	Rust stains can be removed by adding one part of nitric acid to nine parts of warm water. Leave for 30 to 60 minutes, then wash off with plenty of water, and flush any drains thoroughly. See also previous section on Passivating.	Rinse well with clean water. Wear rubber gloves, mix the solution in a glass container, and be very careful with the acid. (see Precautions for acid cleaners)
Embedded or Adhering "Free Iron".		
Routine Cleaning of Boat Fittings.	Frequent washing down with fresh water.	Washing is recommended after each time the boat is used in salt water.
Cooking Pot Boiled Dry.	Remove burnt food by soaking in hot water with detergent, baking soda or ammonia.	Afterwards clean and polish, with a mild abrasive if necessary. See comments re steel wool.
Dark Oxide From Welding or Heat Treatment.	"Pickling Paste" or pickling solutions given on previous page.	Must be carefully rinsed, and use care in handling (see Precautions for acid cleaners).
Scratches on Polished (Satin) Finish.	Slight scratches - use impregnated nylon pads. Polish with scurfs dressed with iron-free abrasives for deeper scratches. Follow polish lines. Then clean with soap or detergent as for routine cleaning.	Do not use ordinary steel wool - iron particles can become embedded in stainless steel and cause further surface problems. Stainless steel and "Scotch-brite" scouring pads are satisfactory.

Precautions

Acids

Acids should only be handled using gloves and safety glasses. Care must be taken that acids are not spilt over adjacent areas. All residues must be flushed to a treated waste stream. Always dilute by adding acid to water, not water to acid. Use acid-resistant containers, such as glass or plastics. If no dulling of the surface can be tolerated a trial treatment should be carried out; especially for pickling operations. All treatments must be followed by thorough rinsing.

Solvents

Solvents should not be used in confined spaces. Smoking must be avoided when using solvents.

Chlorides

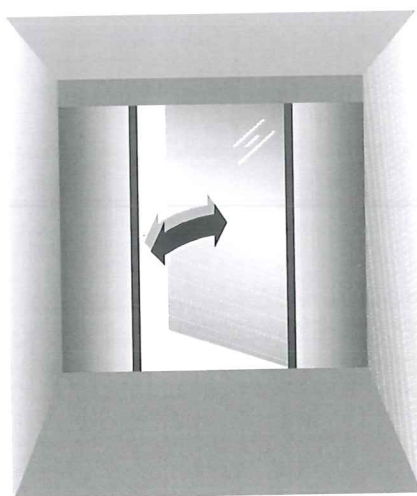
Chlorides are present in many cleaning agents. If a cleaner containing chlorides, bleaches or hypochlorites is used it must be afterwards promptly and thoroughly cleaned off.

Source: Atlas Steels Australia

For more information on this source please visit [Atlas Steels Australia](http://www.atlassteels.com.au)



T-1305 e 2.12.11
Translation of the original
instructions for use



Instructions for Use

For Automatic Swing Doors with Drive

iMotion® 1301 Swing Door Drive

iMotion® 1301.S Swing Door Drive

iMotion® 1401 Swing Door Drive

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Landert Motoren AG and Landert GmbH are certified to ISO 9001.

1 General Information

Target Groups

- Operator of the automatic swing door. The operator is the person responsible for the operation and maintenance of the system.
- Persons instructed by the operator to carry out certain duties, for example the servicing and maintenance of the automatic swing door.

Area of Application

Product name, door system: Automatic swing door

Product name, door drive: **iMotion® 1301 Swing Door Drive**
iMotion® 1301.S Swing Door Drive
iMotion® 1401 Swing Door Drive

Serial number:

Identification plate
(example)



The identification plate with the serial number is placed in the control box (1401) or on the drive itself under the casing (1301, 1301.S).

These Instructions for Use apply to all the above door drives (see the “Technical Data” section for differences).

Explanation of the Symbols



The warning message warns about possible risk of injury.

Text which is highlighted in grey MUST be observed to ensure that the system operates perfectly. Failure to observe these sections can cause damage to equipment.



Functions marked with this symbol are the factory setting. However, they can be reprogrammed by a skilled person.



Optional components which are not present in all systems.

Technical Data	iMotion 1301	iMotion 1301.S	iMotion 1401
Drive type	Electromechanical swing door operator with AC permanent magnet synchronous motor		
Control system	iMotion MCU32		
Mains connection	1 x 230/1 x 115VAC, 50 – 60Hz, 10A		
Power consumption	6 ... 250 W	12 ... 330 W	4 ... 250 W
Power supply	24VDC +0,5/–1,5V, max. 18 W*/0,75A, in battery operation min. 16,5V 40V PWM/max. 24W*/2 A, equivalent 6 ... 24VDC, voltage and function programmable. Only for inductive or resistive loads without overload protection. * Total load 30W	24VDC +0,5/–1,5V, max. 36 W*/1,5A, n battery operation min. 16,5V 40V PWM/max. 24W*/2 A, equivalent 6 ... 24VDC, voltage and function programmable. Only for inductive or resistive loads without overload protection. * Total load max. 50W	
Protective class, drive	IP22	IP22	IP 67 (7 days water up to upper edge of floor box)
Protective class, control box	–	–	IP 55
Ambient temperature	–20 °C to +50 °C		
Noise emission level	< 70 db (A)		

2 Safety

2.1 Responsibilities

For instructing the operator:	A skilled person from a TORMAX sales partner
For operating the system:	The operator or a person instructed by the operator
For maintenance and function control:	The operator or a person instructed by the operator
For annual testing and approval:	A skilled person authorised by the manufacturer

Skilled persons are persons who have adequate knowledge in the field of power-operated doors as a result of their specialist training and experience and who are so familiar with the relevant health and safety regulations, guide-lines and generally recognised codes of practice that they are able to assess the condition of power-operated doors with regard to the safety of their operation.

Maintenance of electrical parts must be carried out by a trained electrician.

2.2 Use for the Purpose Intended

The automatic swing door is intended exclusively for use in dry premises in areas used as a pedestrian thoroughfare. Special techniques can also be used to attach the drive unit to the building envelope. The manufacturer will not accept any liability whatsoever for loss or damage caused by improper use, failure to comply with the maintenance specification (see section 6) or unauthorised modification of the system.

2.3 Pre-Conditions for the Operation of the System

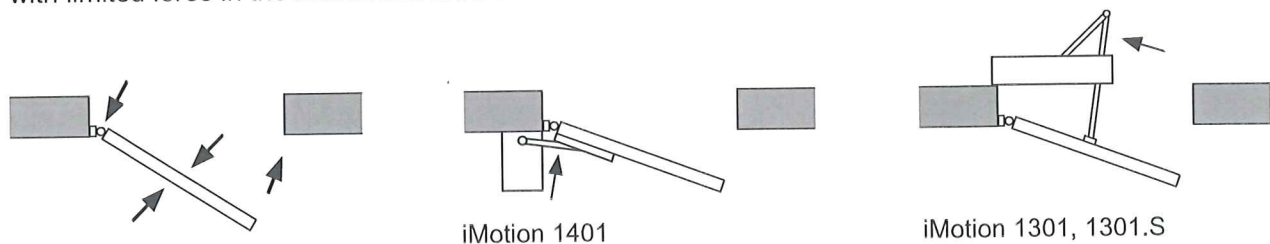
The door system was designed, installed and checked for functionality and safety by skilled persons prior to hand-over to the operator. The company responsible for the system's installation instructed the operator on the system's use and maintenance as well dangers associated with the system operation. The operator has confirmed this by his signature in the system test book T-879.

The provisions imposed by law, health and safety and occupational health regulations for the avoidance of accidents and the protection of the environment which are generally applicable in the country in which the system is operated supplement the Instructions for Use.

- Read the Instructions for Use carefully before commissioning the automatic swing door.
- Only use the system when it is in perfect working order. The operating conditions, inspection and maintenance intervals stipulated by the manufacturer must be observed (section 6).
- Safety facilities (e.g. sensor technology, protecting covers) must not be removed or disabled.
- Arrange to have any faults rectified immediately by a skilled person.

2.4 Hazards and Risks

Depending on the system design and equipment, there is a residual risk of crushing, shearing and collision with limited force in the movement area of the door leaf.



Hazards can arise:

- in the region of all closing edges (particularly close to the hinge)
- in the region of the linkage lever
- if, for example, sales stands are erected in direct proximity to the operating range of the door leaves
- due to deliberate damage by vandals, defective sensors or sensors which are no longer properly adjusted, sharp edges, incorrectly supported and defective casing or missing covers.

2.5 Checks

The regular checks and examinations set out in Chapter 6 must be carried out as instructed by the manufacturer. The manufacturer recommends that a maintenance contract be concluded in order to operate the system safely and to maintain its value for as long as possible.

2.6 Decommissioning the System in the Event of a Fault

If there is a fault the automatic swing door may only be taken out of service by a skilled person, the operator or a person who is instructed to do so by the operator. This must be done on all occasions on which the safety of persons could be compromised.

- Disconnect the system from the power supply.
- Select operating mode "P" if the system continues to operate using the internal emergency power supply (see section 3.3 for operating modes).
- Open the door manually and secure in the open position if it is installed in an escape route.
- Fire doors must never be secured in the open position even in emergencies.

See section 7 for rectification of faults.

2.7 Disposal

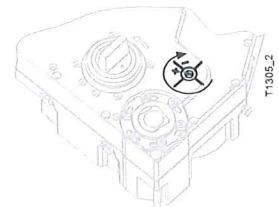
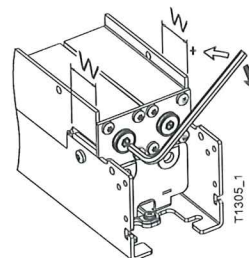
This system must be properly dismantled at the end of its working life. Its disposal must comply with national regulations. We recommend that you contact a skilled person disposal company.



- Aggressive acids.
- Risk of injury if you dismantle the battery module.
- Dispose of batteries properly.



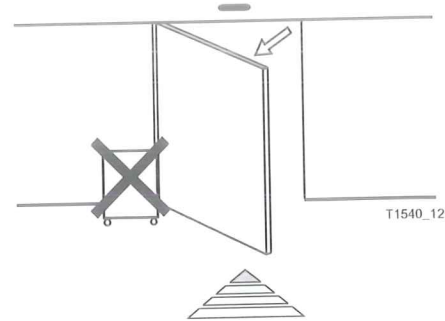
- Flying around parts.
- The tensioned spring represents a hazard when dismantling the drive.
- Before opening the casing, release the tension on the spring up to the stop as indicated in the drawing (iMotion 1301/1301.S: W = 0)



- Broken glass.
- Risk of injury when dismantling the door leaves.
- Take care when transporting the door leaves.

3.2 System Function

The operator of the door system is responsible for ensuring that the automatic swing door is freely accessible at all times. The operator must particularly ensure that the swing area of the door leaves is not obstructed by any objects.



Automatic Door Operation with Sensors

When operating automatically (AUTOMATIC operating mode) the door is automatically opened from both sides by sensors when a person approaches.

A key switch ◆ or card reader ◆ normally allows access from outside when the door is in operating mode EXIT or OFF. The door unlocks, opens and closes again as soon as no further sensors are activated after a hold-open time which is set separately.

The sensors for the door opening and the maintained opening of the door are arranged and adjusted in such a way that the door opens promptly and remains open as long as a person is within the operating range of the door leaf. The door can close nevertheless but only after a time of approx. > 1 minute.

The reduced closing speed which is set by the installer and is adjusted in line with the door weight, combined with a force of < 150 N prevents the impact of the moving leaves on a person from being too severe. The obstruction is also detected by the control system and the door automatically reverses.

Safety sensors are necessary and depend on the design of the door system (distances, speeds, forces applied by the door). When a person moves into the danger area, the door leaf stops or slows down to a very low speed depending upon the settings performed by the fitter at the time of commissioning.

Semi-automatic Operation with “Push-and-Go”

Instead of having sensors the door can be manually pushed open. After being detected by the control system, the door opens automatically and closes again.

Traffic Control

Movement through the door can be allowed in only one direction if desired (operating mode EXIT) or completely blocked (operating mode OFF).

If there is a high level of pedestrian traffic or if the door is to be used by infirm or frail persons, the door can be switched to operate in operating mode AUTOMAT 2 with a longer hold-open time.

Automatic System Monitoring

The control system monitors the safety sensors by a cycle of active tests. The control system also conducts continuous internal system tests. If a safety-related component should fail, the system automatically switches into a safe condition. At the same time the fault number is displayed on the user interface. You can find further information on this subject in section 5 “Procedure in the Event of a Fault”.

Electric Lock ◆

The system can be locked in the closed position by means of an electric lock ◆.

Operation in the Event of a Power Failure

Depending on the equipment installed, the following functions are possible:

- Controlled closing using the integral spring. The door can be opened manually by means of the door handle (unlocking).
 - The door then closes again in a controlled manner using the integral spring.
- Controlled opening using the integral spring. The door remains open.

- Continued operation for a certain period in the current operating mode by means of a battery unit ♦.
- Unlocking and opening of the door from outside by means of a key switch and the battery unit ♦.

3.3 Operating Modes

The automatic door system can be operated with the TORMAX user interface ♦ (6 operating modes and status display) or with an operating mode switch ♦ (3 operating modes).



Operating Mode OFF

The internal and external sensors are disregarded. The door is mechanically held in the closed position and locked using an electric lock ♦. Access is only possible using the key switch or if the door is manually unlocked using a key or the door handle is used to open the door manually.



The door can still be used for 5 seconds after selecting operating mode OFF. The door then locks at the end of this period as soon as it is closed. The transition is signalled on the user interface by the flashing display of operating mode OFF.



Operating Mode AUTOMATIC 1

The operating mode AUTOMATIC 1 is normally used during the day. The door opens automatically through the inside and outside sensors.

The door can behave differently depending on the settings programmed during commissioning:

“Push-and-Go”

If the door is manually pushed in the opening direction, it reacts as if to a command to open: it opens automatically, waits for the hold-open time and then closes.

Systems with an Electric Door Lock ♦

The lock unlocks on every valid opening impulse. The door lock must be manually unlocked with the door handle before it is possible to open the door with the “Push- and-Go” system.

In this operating mode the door lock can also be permanently unlocked depending on the setting programmed at the time of commissioning.



Operating Mode AUTOMATIC 2

Corresponds to operating mode AUTOMATIC 1 but a different motional sequence can be set during commissioning (e.g. a slower opening movement, different open positions and a longer hold-open time).



Operating Mode EXIT

Operating mode EXIT is normally used for the period before the shop or office closes. The door will only open automatically when activated by the internal sensor. When the door opens the external sensor is also monitored for safety reasons. The open position is determined by the preceding selection of the operating mode AUTOMATIC 1 or AUTOMATIC 2. Additionally the door can be locked automatically by the door lock ♦.

The door lock can be permanently unlocked in this operating mode in case of need.



Operating Mode OPEN

The door opens and remains open. The open position is determined by the preceding selection of the operating mode AUTOMATIC 1 or AUTOMATIC 2. The door opens again on receiving the next open impulse or when changing the operating mode to OFF and back again to OPEN.

P Operating Mode Manual Operation

The door leaf can be freely moved. This operating mode can be used for cleaning the door leaf or for temporarily shutting down the door. The system is reset after leaving this operating mode.

In this operating mode the door lock can also be permanently unlocked depending on the setting programmed at the time of commissioning.

4 Operation

The automatic swing door may only be operated by a skilled person, the operator or a person instructed by the operator.

4.1 Commissioning

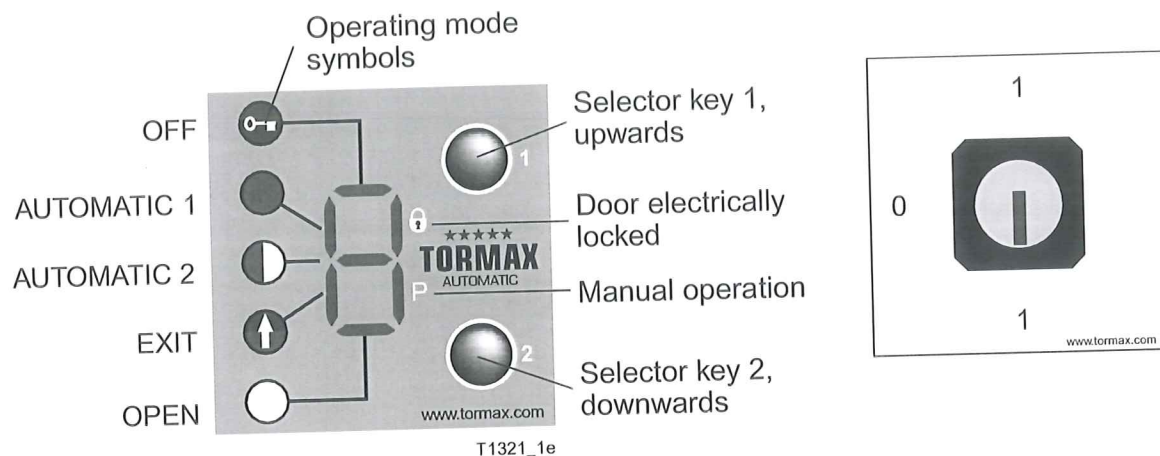
Before switching on the mains power supply:

- Unlock the optional mechanical door lock.
- Check that the movement area of the door leaves is free from obstructions such as racks, plant containers, umbrella stands etc.
- Switch on the mains power supply and select operating mode AUTOMATIC 1, for example.
 - The first movement after switching the power on for the first time is slow and H62 and H67 are displayed. The control system is defining the closed position of the door leaf (H62) and is checking the door leaf travel distance (H67).
 - The door is now ready for operation.

4.2 Operation with the TORMAX User Interface ♦

TORMAX User Interface ♦

Lock ♦ for User Interface



Selection of Operating Modes

- Release lock ♦ for user interface.
- Press selector keys 1 or 2 briefly. The corresponding operating mode symbol is illuminated.

Fault Display

E.g. H91 or E42 → See section 7 for the meaning of the display.

- Reset by pressing the selector key 2 briefly.

Resetting the System

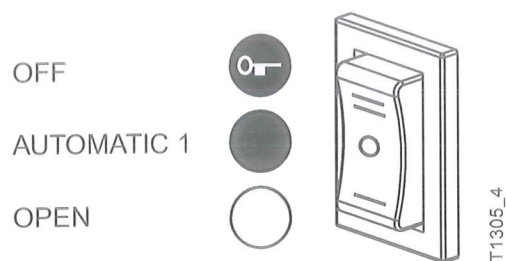
- Press the selector key 2 for at least 5 seconds.

The software is restarted. The control system then conducts a calibration run, checks the travel distance and looks for the closed position. Displayed as H62 and H67.

4.3 Operation with an Operating Mode Switch ◆

Selection of Operating Modes

The switch position defines the operating mode.



Resetting the system


- Change the operating mode in the event of a fault
or
- Cut off power supply to the system for at least 5 seconds.

4.4 Operation on Power Failure

Opening a Door using a Key Switch ◆ with a Battery Unit ◆

- Turn the key switch to the “on” position and hold in place for at least 5 seconds, then turn the key to the original position.
→ The battery is activated using the “wake up” function.

The key switch must not remain permanently in the “on” opposition.

- The door is unlocked and opened.
- The battery switches off again after the time programmed  by the installation engineer or when the battery is fully discharged.

If required, the operating mode can be changed on the user interface during the wake-up.

4.5 Resetting the Panic Fitting ◆

- Select operating mode OFF (operating mode switch ◆, user interface ◆) or disconnect the operator from mains (installation switch, mains plug).
- Push the door leaf back into the initial position.
- Choose operating mode AUTOMATIC 1 or switch on operator.

5 Procedure in the Event of a Fault

Faults are evident from abnormal door behaviour and/or as a fault display on the user interface. Fault displays on the user interface take the form of a flashing "E" or "H" followed by two figures.

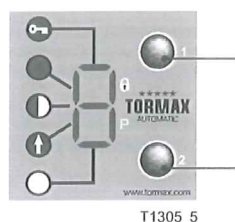
H = notification > the system can continue to be used.

E = fault > the system is stationary.

Some faults or notifications can be rectified by restarting the door drive with a software reset and/or briefly disconnecting the system from the power supply.

Fault Display and Reset Using the TORMAX User Interface

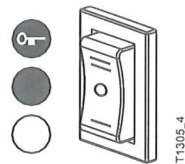
See the table in section 7.1 for an overview of the fault displays.



Browse through the fault display using selector key 1 upwards (to display several faults).

1. Reset the fault display, press selector key 2 (downwards) briefly.
2. Software reset: press the key for 5 seconds.

Reset of the Fault with the Operating Mode Switch



Software reset in the event of a fault: change the operating mode.

Reset of the Fault by Disconnecting the Power Supply

If the system does not have a battery unit, disconnect from the power supply for about 10 seconds.

If this does not reset the fault or if it re-occurs after a short time, you must arrange for the fault to be rectified by a skilled person from your TORMAX dealer. In this case note the fault number and inform the dealer. See the last page or the service tag on the system for the dealer's address.

6 Maintenance

The system was tested and approved by a skilled person before initial commissioning. The manufacturer recommends that you conclude a service contract in order to maintain the value of your system for as long as possible as well as to ensure the system operates reliably and safely for a long time.

Only genuine TORMAX spare part should be used. The manufacturer accepts no liability if you fail to observe this requirement.

The following maintenance work must be carried out:

6.1 Cleaning



- Closing doors can crush – danger!
 - Trapped limbs can lead to serious injury.
 - The system must only be cleaned in operating mode OFF, OPEN or Manual Operation.
- Clean the control box, user interface, the covers and door leaves with a damp cloth and a commercial cleaning agent.

6.2 Functional Checks

The operator must check the function and safety devices of the automatic swing door at least every three months. This will ensure that faults or hazardous changes in the system are detected at an early stage. See section 7.2 "Check-list for Functional Checks" for items to be checked.

You should arrange for any defects detected during the routine checks to be rectified immediately by a TORMAX dealer (see the last page of this Manual for the address).



- Possible malfunction of the automatic swing door.
- Potential hazards – injury caused by impact or crushing.
- Do not use any part of your body for functional checks. Use a suitable object (e.g. styro-foam or cardboard) instead.

6.3 Maintenance and Testing

Maintenance and testing should only be carried out by a trained skilled person following the manufacturer's instructions.

Maintenance Interval

The maintenance interval depends on the frequency of use but the system must be maintained at least once per year.

Scope of the Maintenance Work

The content of the maintenance work is specified by the manufacturer in an inspection list.

System Test Book

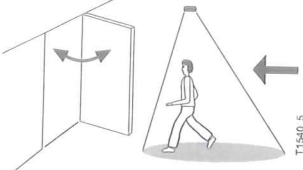
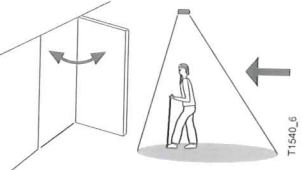
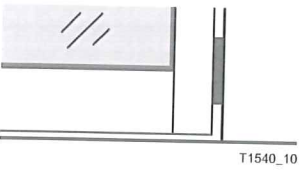
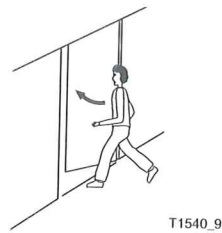
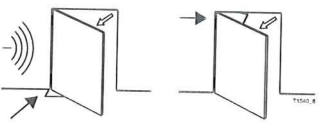
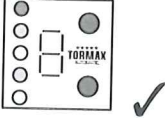
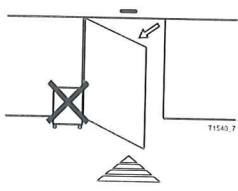
The test findings are recorded after the test in the system test book. The operator must keep it in a safe place.

7 Appendix

7.1 Fault Table

System Behaviour	No.	Cause	Remedy/Rectification
The door stops when opening.	H91	Electronic obstacle recognition caused by persons, wind pressure and ventilation when opening.	Remove the obstruction. Avoid drafts.
Door reverses when closing.	H92	Electronic obstacle recognition caused by persons, wind pressure and ventilation when closing.	Remove the obstruction. Avoid drafts.
The door stops repeatedly when opening.	H93	Electronic obstacle recognition on opening in the same position by stationary obstacle.	Remove the obstruction.
The door stops repeatedly when closing.	H94	Electronic obstacle recognition on closing in the same position by stationary obstacle.	Remove the obstruction.
Search run notified.	H62 H67	Search run of the door after a reset or after power recovery.	Allow the search run to travel its full course.
Door operates at a reduced speed.	H71	Battery operation	Wait for power recovery Switch on mains supply.
Door remains closed.	–	Operating mode for example OFF, EXIT or P. The door is prevented from moving by the lock.	E.g. select operating mode AUTOMATIC 1. Unlock the lock. Push the door closed briefly.
Door remains open.	–	Operating mode for example OPEN or P. The door is prevented from moving by the lock.	E.g. select operating mode AUTOMATIC 1. Remove the obstruction.
The door remains closed.	E31	The safety facility in the opening direction is permanently active (>1 minute) or defective.	Remove objects from within the range of the sensor(s).
The door remains open	E32	The safety facility in the closing direction is permanently active (>1 minute) or defective.	Remove objects from within the range of the sensor(s).
The door does not open or does not close.	E33	The safety facility for the swing area is permanently active (>1 minute) or defective.	Remove objects from within the range of the sensor(s).
The door does not open or does not close.	E34	The stop safety facility is permanently active (>1 minute) or defective.	Remove objects from within the range of the sensor(s).
The door remains open.	E41 E42 E43	Activator inside is active > 1 min. Activator outside is active > 1 min. Key switch is active > 1 min.	Get sensor adjusted by a skilled person. Reset the key switch.
The door stands still	E5..	Anomaly in the travel distance. Solid obstruction in the movement area.	Remove firm obstacle in the travelling range of the door. Perform a software-reset.
The door stands still	E61 E62	Power supply is overloaded or voltage too low.	Get the power supply and connections checked by a skilled person.
The door stands still	E64 E65	Drive/control system is overheated.	Wait for the automatic reset after the door/control system has cooled. Protect from direct sunlight.
The door stands still.	E.. E8..	Control system shut down for safety reasons.	Perform a software-reset.
The door collides with people.	–	Safety device or setting inadequate.	Shut down the system. (see section 2.6).

7.2 Check-List for Functional Checks

Item To Be Checked	Procedure	Result
Sensors		
 T1540_5	<ul style="list-style-type: none"> Walk through the door directly from the front and from different directions at normal speed, starting both from the inside and outside. 	The door opens at the right time and with sufficient speed so that passage through the door is not hindered.
Safety Sensors		
 T1540_6	<ul style="list-style-type: none"> Walk through the door directly from the front and from different directions at a slow speed like an infirm person, starting both from the inside and outside. 	The door opens and remains open until you are completely through the door.
Swing Leaf, Door Frame		
 T1540_10	<ul style="list-style-type: none"> Check the glass door fillings, door edges and rubber profiles for damage. 	<p>The door fillings have no sharp edges and splintered glass.</p> <p>The side parts and the door seals are in place and undamaged.</p>
Panic Fitting ♦		
 T1540_9	<ul style="list-style-type: none"> Isolate the drive from the power supply (main system switch, mains plug) or select operating mode OFF. Then push the door in the direction opposite to the opening direction until the panic fitting releases the door leaf. Now push the door leaf back to the initial position. 	The panic fitting can be released and returned to the initial position.
Drive, Lever and Hinges		
 T1540_8 iMotion 1401 iMotion 1301, 1301.S	<ul style="list-style-type: none"> Check the noises made while the door moves. 	No unusual and noticeable noise can be heard from the drive, the lever or in the region of the hinges. No significant wear is visible.
Operating components, lettering and marking		
	<ul style="list-style-type: none"> Check the function and marking of operating controls. Check all lettering and marking for their condition. 	The operating controls are functioning correctly; the markings are visible and legible.
System Vicinity		
 T1540_7	<ul style="list-style-type: none"> Check access to the door and the movement area of the door leaves. 	Access to the door is free from objects and items likely to cause the user to trip. There are no objects such as shelves, plant containers and umbrella stands within a radius of 50 cm of the movement area.



Declaration of Incorporation

In the sense of the guideline for machines 2006/42/EG, appendix II B

Product: Automatic swing door drive

Type designation: iMotion 1301 Swing Door Drive
iMotion 1301.FIRE Swing Door Drive
iMotion 1301.S Swing Door Drive
iMotion 1401 Swing Door Drive
iMotion 1401.FIRE Swing Door Drive

Serial number: from 0002189307

Manufacturer: Landert Motoren AG
Unterweg 14
CH-8180 Bülach

Person responsible
for documents: Dr. Christoph Bleiker
Landert Motoren AG
Unterweg 14
CH-8180 Bülach

Base documents: Guideline 2006/42/EG (guideline for machines)
DIN 18650-1

We declare that the product, which is referred to by this declaration, is in conformity with the above listed guiding rules.

The commissioning of the door installation in which the above mentioned product is built in is forbidden as long as the door installation does not comply with the guideline for machines.

The guideline 2006/95/EG (low tension) and the guideline 2004/108/EG (electro-magnetic-compatibility) must also be adhered to.

Bülach, September 9, 2011 TORMAX | Landert Motoren AG

Dr. Christoph Bleiker
CEO TORMAX

Dr. Christian Schaal
Research and Development Manager

T-1542 e September 2011

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Phone +41 (0)44 863 51 11 | Fax +41 (0)44 861 14 74
info@tormax.com | www.tormax.com



Declaration of Conformity

In the sense of the guideline for machines 2006/42/EG, appendix II A

Product: Automatic Swing Door
Type designation: ☐ iMotion 1301 ☐ iMotion 1301.S ☐ iMotion 1401
Serial number: .
Manufacturer's address : .

Base documents: Declaration of incorporation by TORMAX I Landert Motoren AG with the document number: T-1542

Additionally to the standards listed in the declaration of incorporation this door installation is in conformity with the regulations listed below:
DIN 18650-2

We declare in sole responsibility, that the above mentioned product, which is referred to by this declaration, is in conformity with the guideline for machines 2006/42/EG (Declaration of incorporation T-1542).

Furthermore, the guideline 2006/95/EG (low tension) and 2004/108/EG (electro-magnetic-compatibility) must also be adhered to. This product is in conformity with the base documents and standards listed above (Declaration of Conformity T-1551).

Place:

Date:

CE authorized person:



the passion to drive doors

TORMAX Sliding Door Drives

TORMAX Swing Door Drives

TORMAX Folding Door Drives

TORMAX Revolving Door Drives

Manufacturer:

Advice, sales, installation,
repairs and service:

TORMAX | CH-8180 Bülach-Zürich

Phone +41 (0)44 863 51 11

Fax +41 (0)44 861 14 74

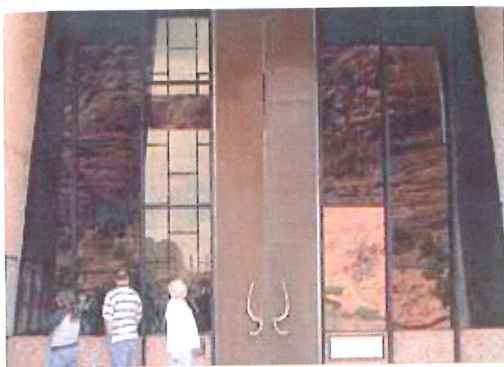
Homepage www.tormax.com

E-Mail info@tormax.com

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ASSA ABLOY, the global leader
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Heavy-Duty Floor Closers

1. Arm Loosening.....	p 3
2. Weather Changes & Closing Speed Adjustments.....	p 5
3. Door Out of Plumb – Offset.....	p 7
4. Door Out of Plumb – Center Hung.....	p 8
5. Door Sagging – Vertical Height Adjustment	p 9
6. Removing a Door.....	p 10

Overhead Concealed Closers

1. Arm Loosening.....	p 11
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Pivots & Pivot Sets

1. Door Sagging.....	p 12
2. Removing a Door.....	p 13

Other Rixson products require no product maintenance.

Maintenance Tips

1) Make sure ARM LOCKING SCREW is tight.

Symptoms of Loose Arm Locking Screw

Door will not fully close.

Door will slam just before closing.

Door will have little or no control in latch speed range.

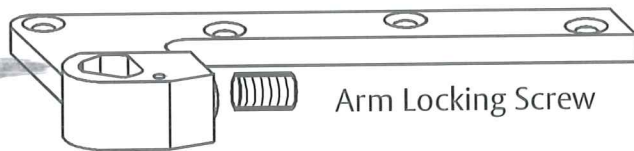
Door will "bounce" back after closing against frame.

On hold open models, door will wiggle when in hold open.

Door will make a loud popping noise when taken out of hold open.

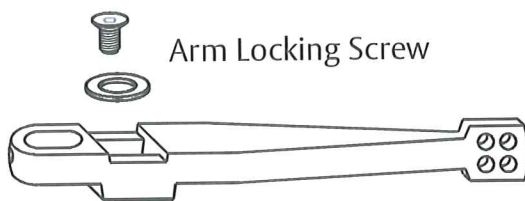
This is one of the most common causes of door control problems and it is very easy to cure. The installation instructions show the method that ensures that the screw is properly tightened.

Offset Floor Closers (Triangular Spindle)



To properly tighten the arm locking screw, remove the arm cover cap and open the door slightly. While wiggling the door back and forth, tighten the screw with the correct size wrench until it is fully seated on the closer spindle. This allows the arm locking screw to firmly connect the arm to the spindle.

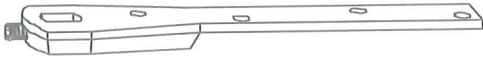
Center Hung Floor Closers (Tapered Spindle)



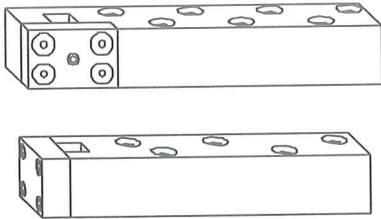
For center hung applications, the door must be removed to access the arm locking screw. Once the door has been removed, tighten the screw securely down through the washer and onto the closer spindle. Once door is rehung, install/tighten arm alignment screws and washers.

Maintenance Tips

Center Hung Floor Closer (Tapered Spindle)



Center Hung Floor Closer (Square Spindle)



For these less common arm applications, the door need not be removed to access the arm locking screws. These arms are firmly affixed to the underside of the door. The door is then banked or slid onto the spindle.

With the square block arms, it is important that the screws be tightened at the same time, not one and then another. This will cause the arm to wobble on the spindle, shortening the life of the installation and the arm.

Maintenance Tips

2) Adjust closing speed valve(s) to proper speed

Check door and frame for conflicts and correct them

Does anything interfere with door that may prevent it from closing?

- Door and frame alignment/building settlement
- Misaligned latch/strike
- Weatherstrip
- Threshold or carpeting
- Severe wind or air pressure conditions

Identify and locate valves

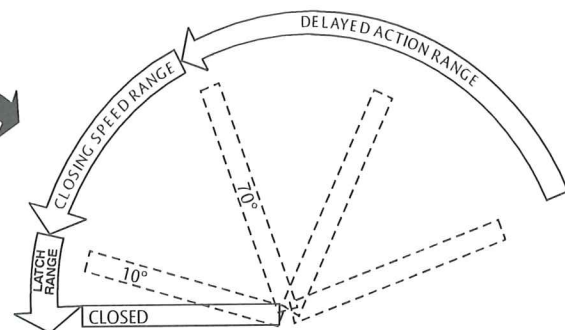
The door may need to be opened slightly to access the valves. Use proper size screwdriver – do not remove valves.

Determine proper closing and latch speed

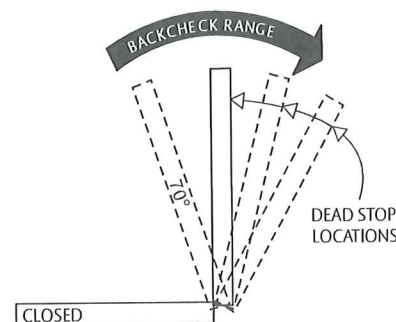
- Any door's speed should be adjusted to suit conditions.
- Exterior doors and doors with latching hardware - faster latch speed.
- Interior doors and doors with push-pull hardware - slower latch speed.
- Location and usage of the door are primary factors - some codes identify minimum closing times for accessibility requirements.
- Floor closers on EXTERIOR DOORS may require seasonal adjustments.
Cold weather - increase closing speed (CCW).
Hot weather - decrease closing speed (CW).



Closing or Latch speed valves
(or optional Delayed Action)

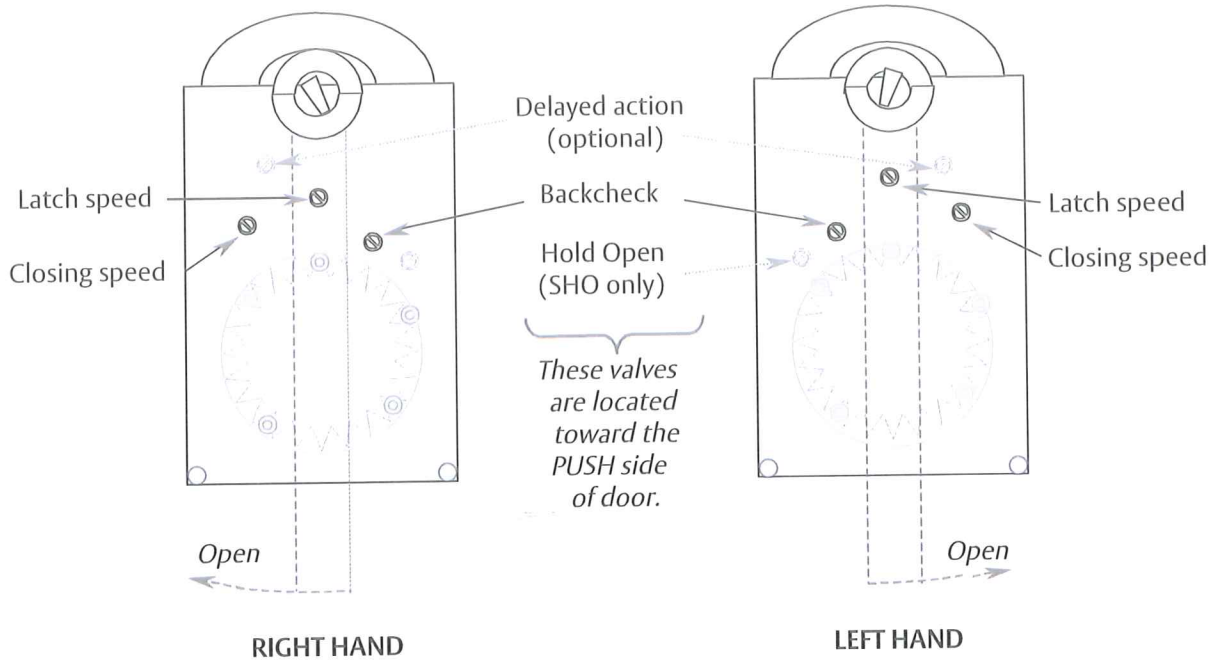


Backcheck valve

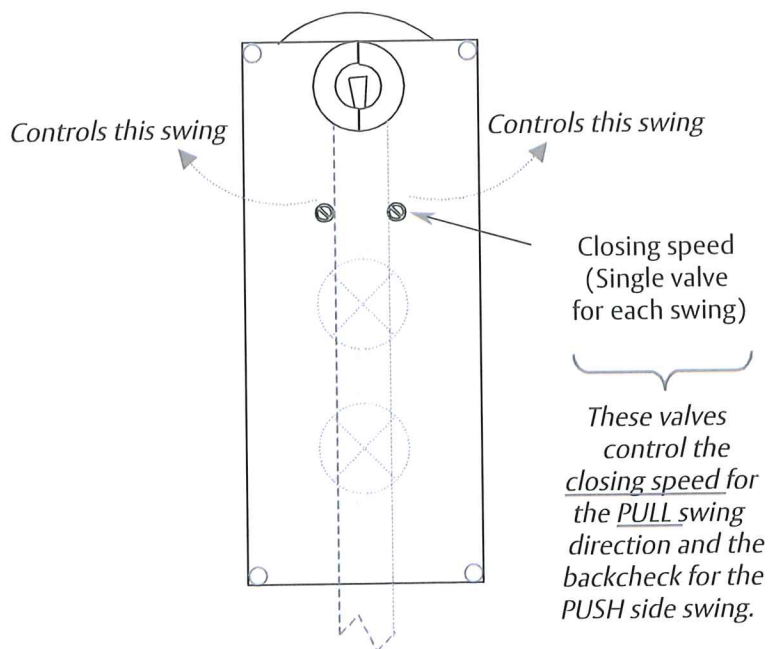


Valve Location Diagrams

Models 27 and 28 (3, 4 or 5 valves)

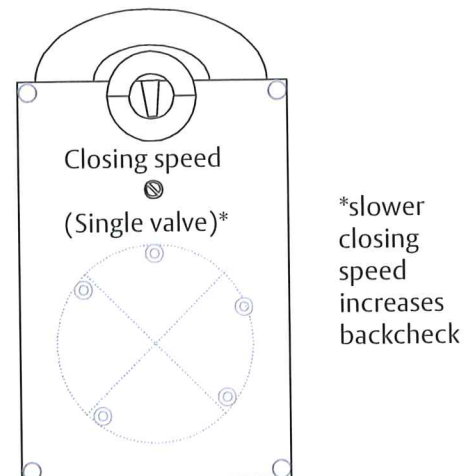


Models 30 and 40 (2 valves)



NON-HANDED, DOUBLE ACTING

Models 20, 21, 25 and 26 (1 valve)



RIGHT OR LEFT HAND

Maintenance Tips

3) Check clearance between door and frame

Is the door hitting the frame before it is completely closed and latched?
Check for wear spots or grooves worn into edge of door.

There should be uniform clearance between the vertical edges of the door and frame (1/8" is ideal). The top of the door should also clear the frame.

The frame should be firmly anchored to prevent movement.

Reinforcing at intermediate and/or top pivot must be attached securely and fasteners tightened.

Center hung applications allow horizontal door adjustment at the bottom arm through the heel edge of the door.

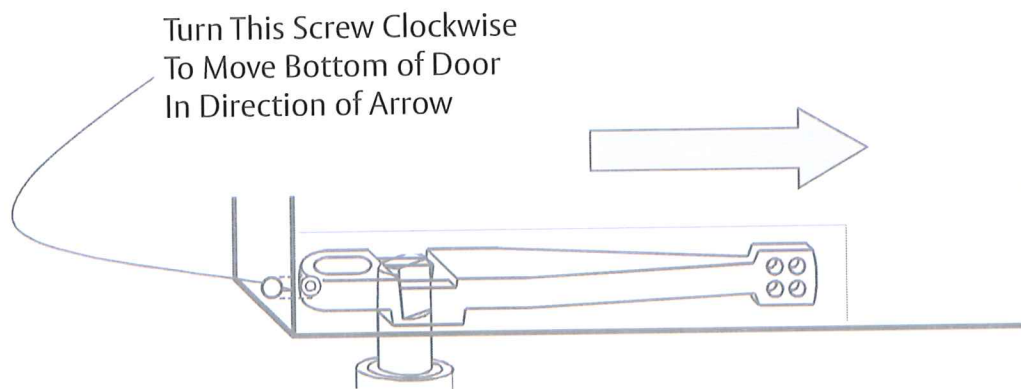
Does the door require an extra "push" to fully latch?
(This causes extra wear on the pivot bearings)

Open door slightly to check for excess movement at the top pivot. If the pivot is securely fastened and still allows "slop," the pivot may need to be replaced.

The door may be "out of plumb." Check alignment with a plumb bob. Centerline of top pivot must be in line with centerline of closer spindle.

Make sure there are no obstructions such as weatherstrip or a misaligned latch and strike.

Correct any obstructions before attempting to adjust closer.

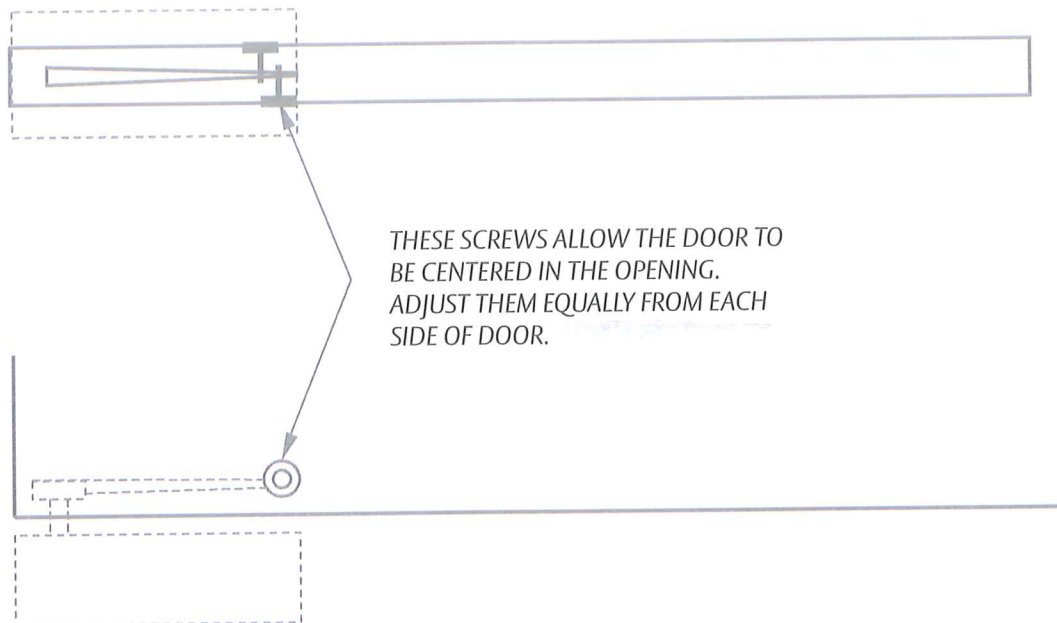


Maintenance Tips

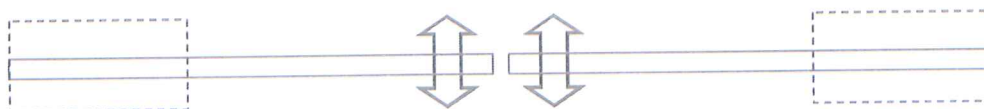
4) Special adjustments for CENTER HUNG FLOOR CLOSERS

For most center hung applications, the bottom arm is attached to the closer spindle and the door is resting on top of the arm. This application can be identified by the presence of the door centering screws.

Door centering screws are located on the face of the door near the lower edge where the bottom arm is attached. There should be a large countersunk finished washer between this screw and the door face.



The centering adjustment is more critical for pairs of doors to get the meeting stiles to align when the doors are in the closed position. This is especially the case with DOUBLE ACTING DOORS, single or pairs.



ADJUST ARM CENTERING SCREWS TO ALIGN EDGE OF DOOR WITHIN OPENING OR ALIGN MEETING STILES ON PAIRS OF DOORS.

Maintenance Tips

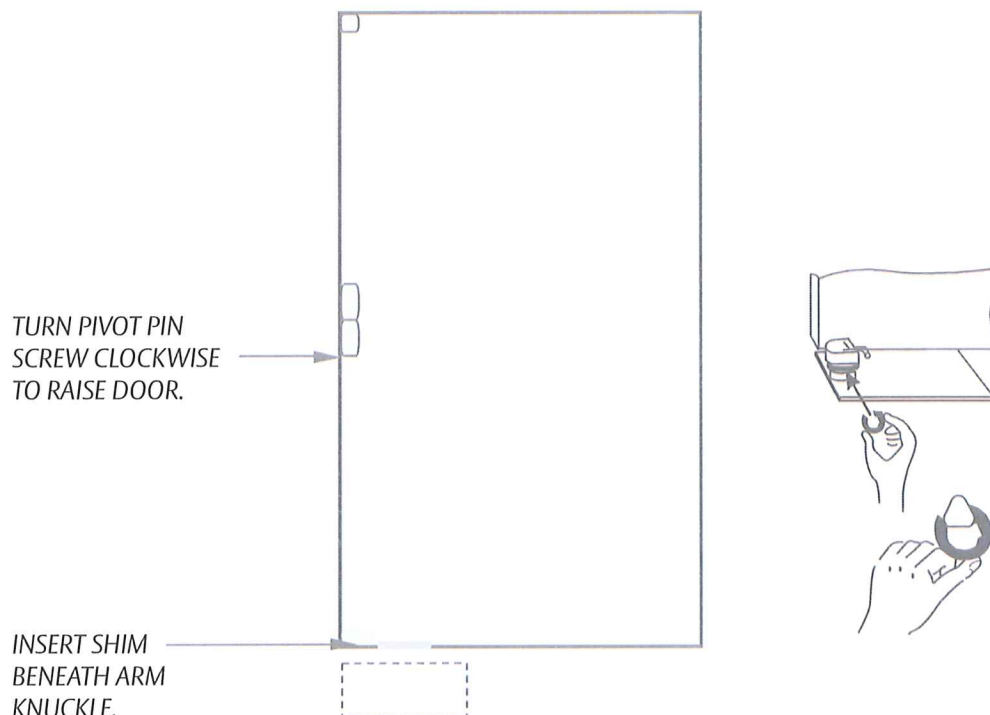
5) Vertical height adjustment

Check the clearance between bottom of the door and the floor. The door should not be dragging on the floor. If the door needs to be raised to provide clearance, shims can be inserted at the bottom to accomplish this.

For CENTER HUNG applications, shims must be inserted between the ARM PLATE "H" and the bottom of the cutout. The door needs to be removed for shims to be added. See installation instructions.

For most OFFSET applications, 1/16" shims can be added without removing the door. Remember that the weight of the door must bear on the bottom arm, not on the intermediate pivot (if used).

- 1) Loosen the ARM LOCKING SCREW on the offset bottom arm.
- 2) Raise the door by lifting the bottom of the door with a crowbar (or by removing the cover cap on the intermediate pivot and turning the pivot pin screw clockwise).
- 3) While the door is held in the raised position, insert the required quantity of shims (P/N 275065) directly beneath the bottom arm.
- 4) Relieve the tension on the crowbar (or intermediate pivot) and allow the bottom arm to carry the entire weight of the door.
- 5) Re-tighten the ARM LOCKING SCREW.



Maintenance Tips

6) Removing a door from a floor closer

Before demounting the door, it is helpful to turn the closing speed valve down to its slowest setting (do not force). This will prevent the closer spindle from turning too quickly while the door is being removed.

CENTER HUNG APPLICATIONS

The frame above a center hung door usually prevents the door from being simply "lifted" out of the opening. The top pivot is specially designed to allow the pin that holds the top of the door in place to be retracted to facilitate installation and removal of the door.

Most center hung floor closers use the "standard" bottom arm arrangement. For special applications or extra heavy doors, please consult the factory.

- 1) Remove door centering screws (if used) from bottom door face.
- 2) Loosen arm adjustment screw from heel edge of door.
- 3) Open door slightly (about 30°) to access top pivot. While door is being held, retract top pivot pin by turning screw counterclockwise.
- 4) When pin is fully retracted, lean the door toward you until the top of the door clears the frame.
- 5) Lift door off arm/closer assembly.

OFFSET HUNG APPLICATIONS

Offset hung doors will usually allow the door to be lifted off the closer spindle without interference from the frame.

- 1) Open the door slightly.
- 2) Remove the screws from the FRAME PORTION of the intermediate pivot(s).
- 3) Remove the cover cap(s) from the knuckle of the TOP PIVOT to access the top pivot pin. (If the pin is held in place by a set screw, loosen the set screw.)
- 4) While the door is being held, remove top pivot pin and allow door to lean toward you until the door can be lifted straight up. (Intermediate pivot frame portion should fall out at this point.)
- 5) Lift door (with bottom arm and door portions of intermediate and/or top pivot still attached to door) off closer spindle.

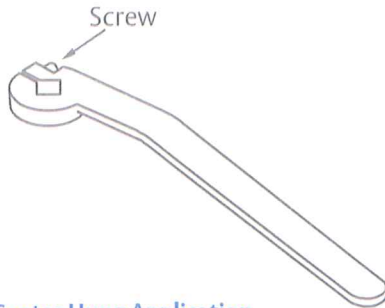
Maintenance Tips

1) Make sure Arm is tight on Spindle

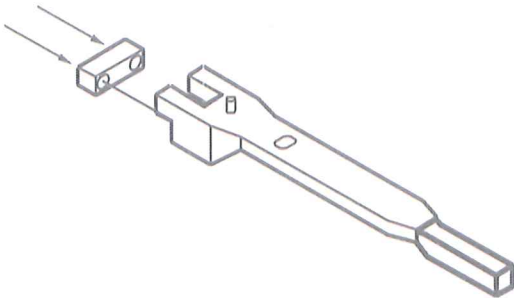
Symptoms of Loose Arm

Door will not fully close.
Door will slam just before closing.
Door will have little or no control in latch speed range.
Door will “bounce” back after closing against frame.

Offset Application



Center Hung Application



It is important that the screws be tightened at the same time; not one fully and then the other. This will cause the arm to wobble on the spindle shortening the life of the installation and the arm.

Also – Insure arm alignment screws are secure on the end load application.

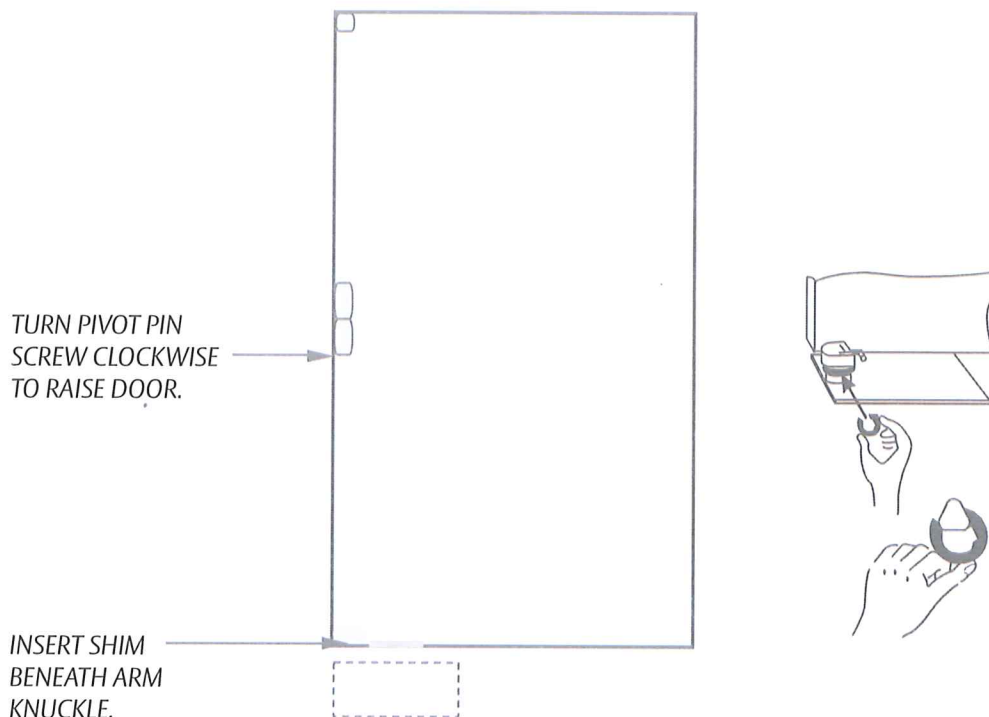
Maintenance Tips

1) Vertical height adjustment

Check the clearance between bottom of the door and the floor. The door should not be dragging on the floor. If the door needs to be raised to provide clearance, shims can be inserted at the bottom to accomplish this.

For most OFFSET applications, 1/16" shims can be added without removing the door. Remember that the weight of the door must bear on the bottom arm, not on the intermediate pivot (if used).

- 1) Loosen the ARM LOCKING SCREW on the offset bottom arm.
- 2) Raise the door by lifting the bottom of the door with a crowbar (or by removing the cover cap on the intermediate pivot and turning the pivot pin screw clockwise).
- 3) While the door is held in the raised position, insert the required quantity of shims (P/N 275065) directly beneath the bottom arm.
- 4) Relieve the tension on the crowbar (or intermediate pivot) and allow the bottom arm to carry the entire weight of the door.
- 5) Re-tighten the ARM LOCKING SCREW.



Maintenance Tips

2) Removing a door from a pivot

Before demounting the door, it is helpful to turn the closing speed valve down to its slowest setting (do not force). This will prevent the closer spindle from turning too quickly while the door is being removed.

OFFSET HUNG APPLICATIONS

Offset hung doors will usually allow the door to be lifted off the closer spindle without interference from the frame.

- 1) Open the door slightly.
- 2) Remove the screws from the FRAME PORTION of the intermediate pivot(s).
- 3) Remove the cover cap(s) from the knuckle of the TOP PIVOT to access the top pivot pin. (If the pin is held in place by a set screw, loosen the set screw.)
- 4) While the door is being held, remove top pivot pin and allow door to lean toward you until the door can be lifted straight up. (Intermediate pivot frame portion should fall out at this point.)
- 5) Lift door (with bottom arm and door portions of intermediate and/or top pivot still attached to door) off closer spindle.

Notes

Notes

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www.rixson.com

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Tel: 800.461.3007 • Fax: 905.738.2478
www.assaabloy.ca

ASSA ABLOY NA International

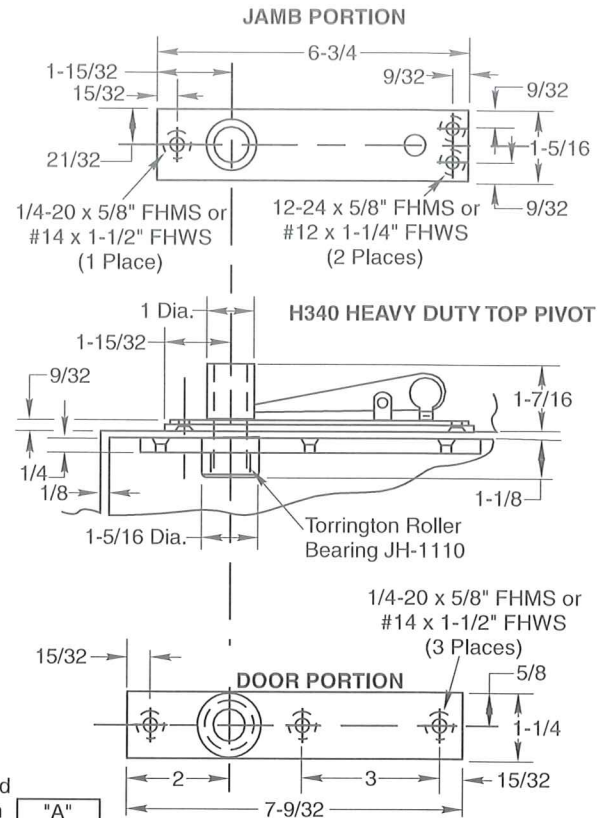
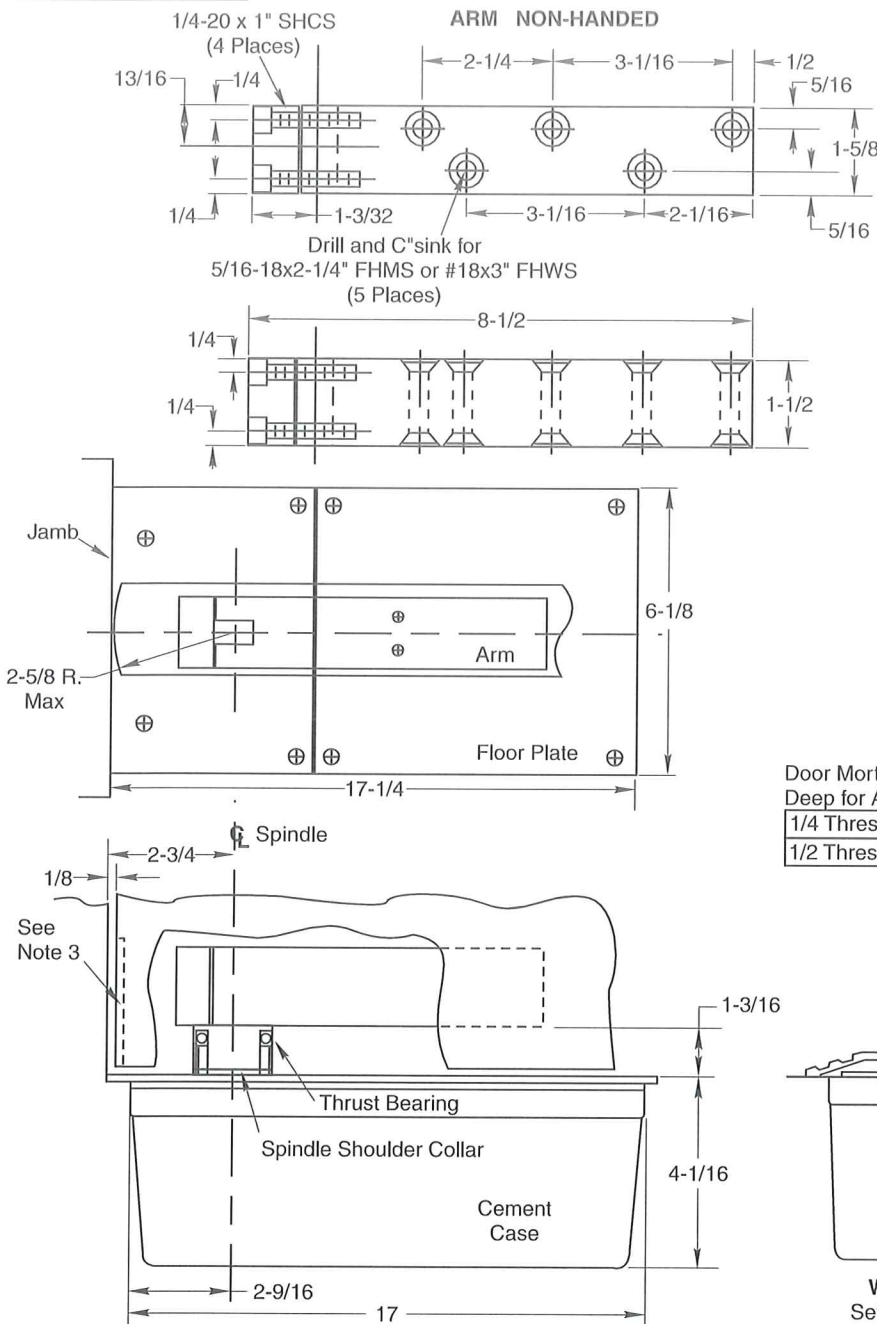
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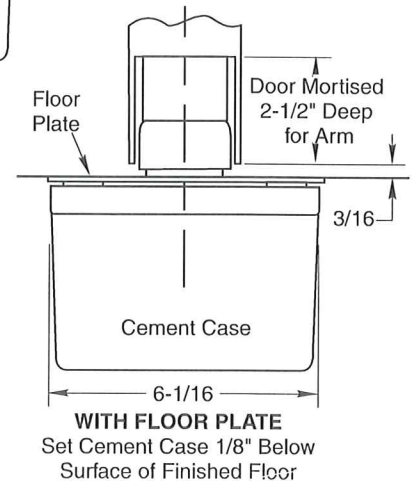
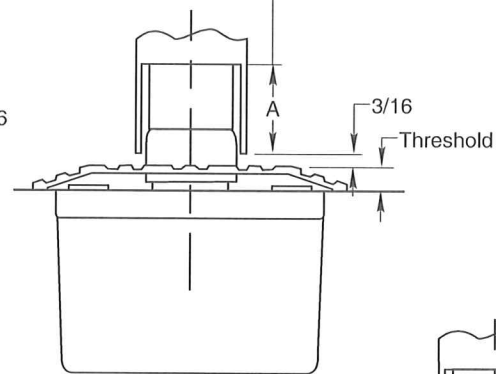
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Template



Door Mortised Deep for Arm

"A"	
1/4 Threshold	2-1/4
1/2 Threshold	2

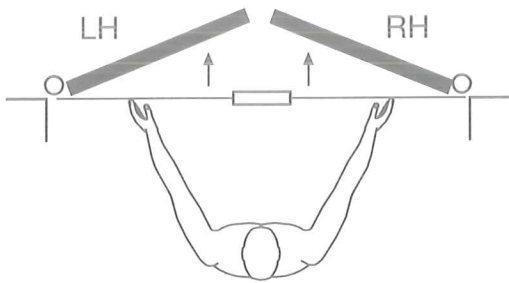


Notes:

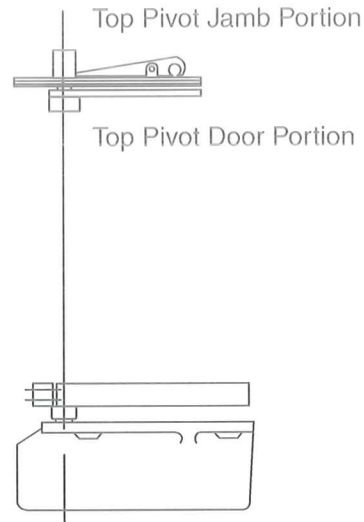
- Do not scale drawing.
- Suitable reinforcing by others.
- Door must have removable heel to allow tightening of arm by others.
- Rixson design threshold available on request.
- Auxiliary stop required.
- This template is for a 2" thick door or larger. For 1-3/4" thick door use template CH20312.
- For wood doors pre-drill arm and top pivot holes to prevent splitting.
- Heavy duty top pivot with 11/16" dia. pin shown engaged.
- All dimensions given in inches. Metric conversion= 25.4 x inch.

Maximum Door Clearance	
Floor Plate	1
1/2 Threshold	13/16
1/4 Threshold	1-1/16

How To Determine Hand of Door



Face a door swinging open away from you. If it opens to the right, it is right hand. If it opens to the left, it is left hand.

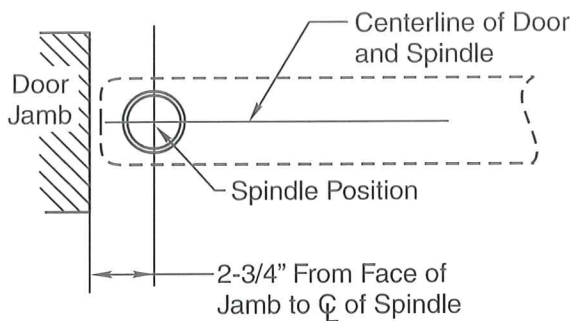


IMPORTANT:

Use plumb line to make sure that center line of top pivot pin lines up with center line of closer spindle.

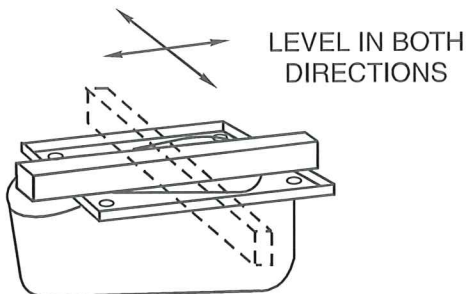
Installation Instructions

1. Locating Closer



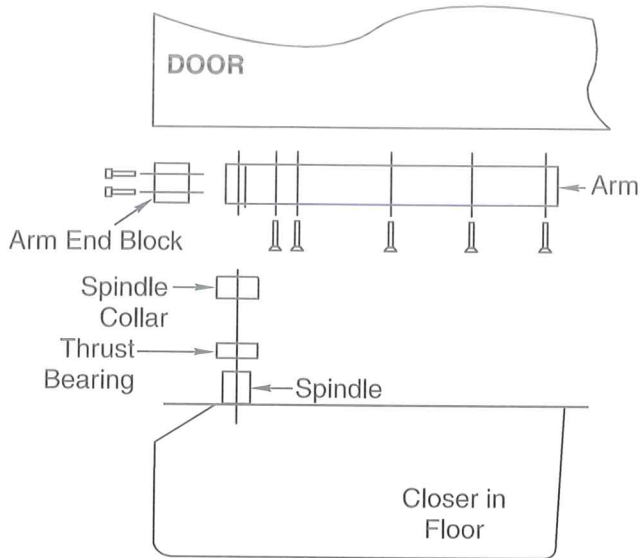
- A. Measure 2-3/4" out from door jamb on centerline of door. This is the location of the spindle center.

2. Install Cement Case in Floor



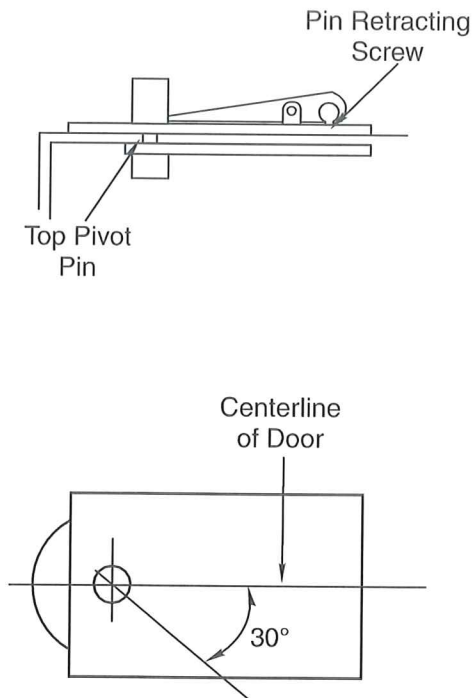
- A. For floor plate application: Cement case is set 1/8" (3.2mm) below floor level.
- B. For threshold application: Cement case is set flush with floor.
- C. Set cement case in floor and block in position.
- D. Case should be parallel with center line of door.
- E. CEMENT CASE SHOULD BE LEVEL. Place levels per Illustration.
- F. Grout in cement case with closer. Cement should not get between closer and case.

3. Install Pivot and Closer Arm



- Install top pivot in door per template.
- Install top pivot in jamb per template.
- Centerline of pivot pin should line up with centerline of spindle. Use plumb line to assure accuracy.
- Mortise door for arm.

4. Hang Door



CAUTION: Closer is shipped with valve screws down. DO NOT FORCE VALVES DOWN.

- Retract top pivot pin by turning retracting pin screw counterclockwise. (see illustration)
- Turn spindle to 30° open position. (see illustration)
- Slide door on spindle. DO NOT ATTEMPT TO CLOSE DOOR. Attach arm cap but do not tighten.
- Line up two portions of top pivot and turn pin retracting screw clockwise.
- Tighten arm end block screws.
- Open door to 60° or more and open screw valve by turning screw counterclockwise. Door will then close.

Closer Adjustment

Closing speeds can be adjusted to suit local conditions and requirements. Label on closer face designates the purpose of each adjustment screw. Adjustments are for speed control.

Closer Type

This closer is one of three types as follows:

1. Non hold-open factory set. No hold-open adjustments.
2. Automatic hold-open factory set. No hold-open adjustment.

Spring Power Adjustments

This closer can be adjusted for increased or decreased spring power.

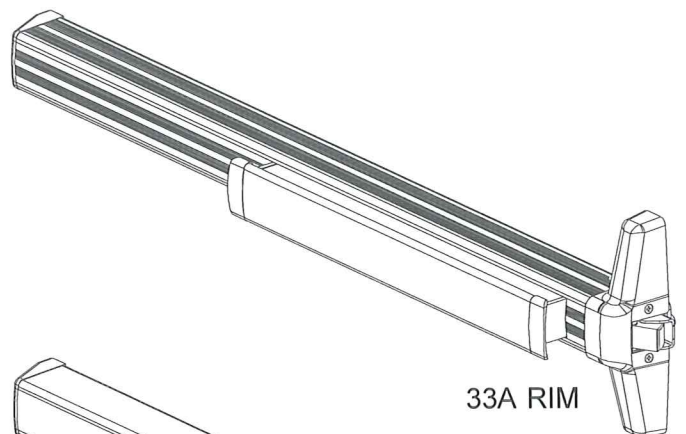
These adjustments if required should be done by an authorized repair agency.

Repairs, parts replacement or internal adjustments must be done by a Rixson authorized repair agency. Consult www.rixsondoorcontrols.com for an authorized repair agency in your area.

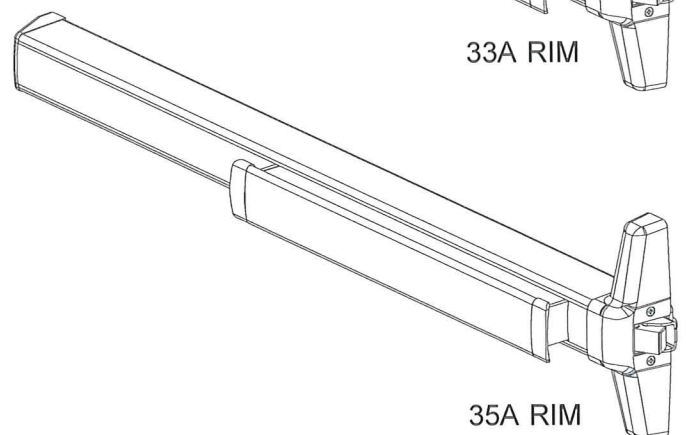
VON DUPRIN®

33A/35A Series Rim Exit Device

Service manual



33A RIM



35A RIM

INDEX

33A/35A Rim Panic Devices	4-5
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CX (Chexit New)	11
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INTRODUCTION

This manual contains a listing of replaceable parts and assemblies for the 33A/35A Rim Panic Exit Hardware Devices. (33A Series and 35A Series devices are almost identical. The 33A Series has a grooved case; the 35A Series has a smooth case.)

HOW TO ORDER

Some parts are sold separately. Other items are available as part of a kit or multiple quantity package. For the best possible service when ordering replacement parts or assemblies, please provide the following information:

- Part number or assembly number
- Description
- Quantity needed
- Finish desired (if available finished)
- Date of original purchase (if known)

To find out the name of your local Von Duprin distributor or sales representative, contact:

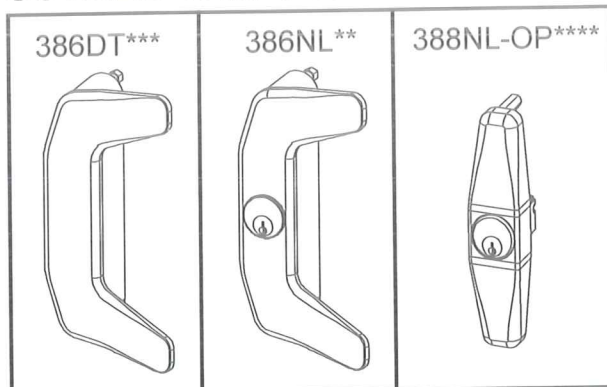
Von Duprin Division
Allegion
2720 Tobey Drive
Indianapolis, IN 46219
Phone: (877) 671-7011

PART NUMBER AND AVAILABILITY CHANGES

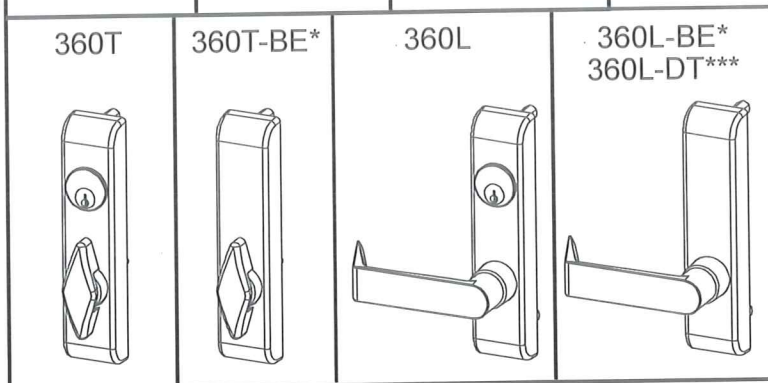
This manual was designed to help illustrate the replacement parts and kits that are available for sale. Because of changes to the product and/or manufacturing process, part numbers and availability can change over time.

OUTSIDE TRIM FUNCTIONS

33A/35A SERIES FINISHES

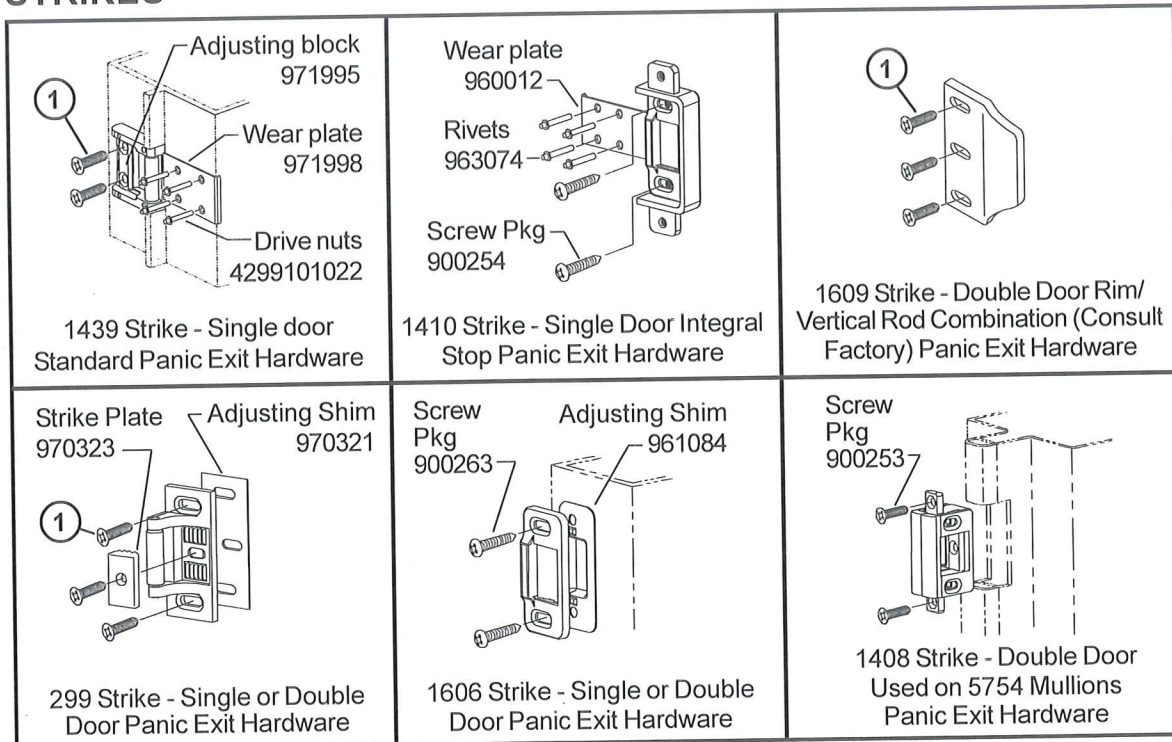


U.S. Std Reference	BHMA Reference	Description
US3	605	Polished Brass
US4	606	Dull Brass
US10	612	Dull Bronze
US15	619	Satin Nickel
US26	625	Polished Chrome
US26D	626	Dull Chrome
US28	628	Anodized Alum. (Clear)
313AN	710	Anodized Alum. (313) Dark Bronze
315AN	711	Anodized Alum. (Black)



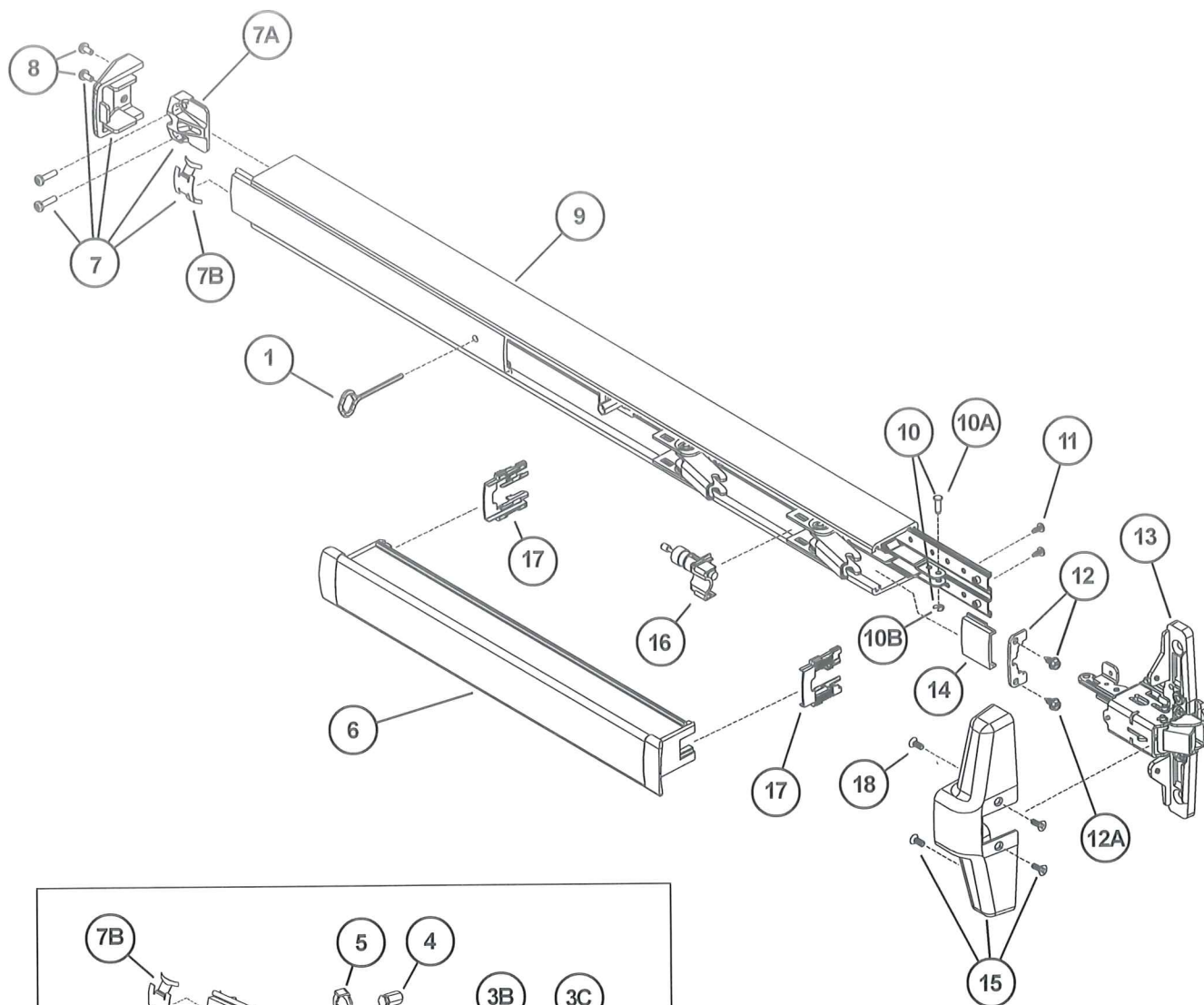
- * "BE" (Blank Escutcheon) no cylinder used - lever always active
- ** "NL" (Night Latch) rigid lever - key retracts latch bolt
- *** "DT" (Dummy Trim) rigid lever for pull operation
- **** "NL-OP" (Optional Pull) needs to be added

STRIKES

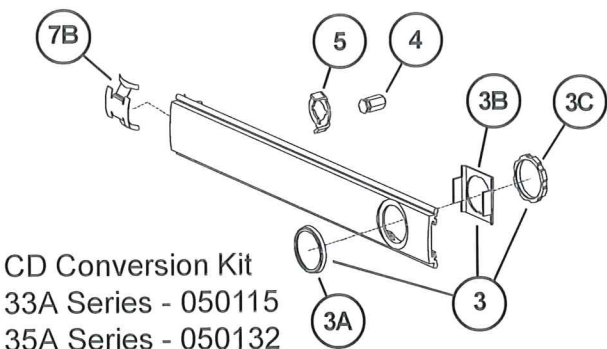


- ① Metal Door Screw Package PKGSRV.1023 (Pkg of 10)
- ① Wood Door Screw 964291 (Qty of 1)

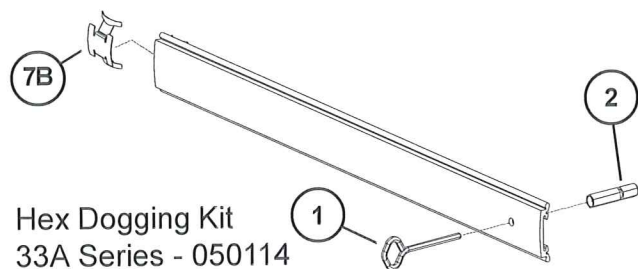
33A/35A RIM PANIC DEVICE



CD Conversion Kit
33A Series - 050115
35A Series - 050132



Hex Dogging Kit
33A Series - 050114
35A Series - 050117



Less Dogging
Cover Plate Kit
33A Series - 050133
35A Series - 050109



33A/35A RIM PANIC DEVICE

Item No.	Quantity	Part No.	Description	Finish
	1	900619	33A/35A Series Mounting Pkg. (1-3/4 & 2-1/4)	
1	1	090085	227 Dog Key 5/32" Hex (Pkg of 10)	
1	1	090005	227 Dog Key 5/32" Hex (Pkg of 2)	
2	1	090040	Hex Dog Shaft (Pkg of 2)	
3	1	107813	Cylinder Mounting Pkg	X
3A	1	050525	Cylinder Collar	X
3B	1	050490	Cylinder Locating Washer - CD/SS	
3C	1	050526	Cylinder Locknut	
4	1	090046	CD Dogging Plug (Pkg of 2)	
5	1	090045	CD Actuator Arm (Pkg of 2)	
6	1	*PBKIT	33A/35A Series Push Bar Retrofit Kit - 3' Door	X
6	1	*PBKIT	33A/35A Series Push Bar Retrofit Kit - 4' Door	X
7	1	050014	33A/35A Series Series End Cap Kit	X
7A	1	050524	Impact Resistant End Cap Bracket	
7B	1	090036	Cover Plate Anti-rattle Spring (Pkg of 10)	
8	1	900597	Device End Cap and C/Case Screw Pkg.	X
9	1	050486	33A Series Mechanism Case - 3' Door	X
9	1	050487	33A Series Mechanism Case - 4' Door	X
9	1	050488	35A Series Mechanism Case - 3' Door	X
9	1	050489	35A Series Mechanism Case - 4' Door	X
10	1	050529	Control Link Pin & Ret. Ring	
10A	1	090031	Series Control Link Pin	
10B	1	090107	Retaining Ring (Pkg of 10)	
11	2	090037	#8-32 x 3/8" Baseplate Screw (Pkg of 10)	
12	1	050530	Mechanism Case Bracket Kit	
12A	2	090073	Mechanism Case Bracket Screw (Pkg of 10)	
13**	1	050403	33A/35A Rim Center Case Less Cover	
14	1	050474	33A Series Cover Plate - C. Case Side	X
14	1	050475	35A Series Cover Plate - C. Case Side	X
15	1	050483	33A/35A Rim Center Case Cover Kit	X
16	1	050491	Shock Absorber & Holder Assembly	
17	2	090049	Push Bar Guide (Pkg of 10)	
18	4	900892	Center Case Cover Screws (Pkg of 4)	X

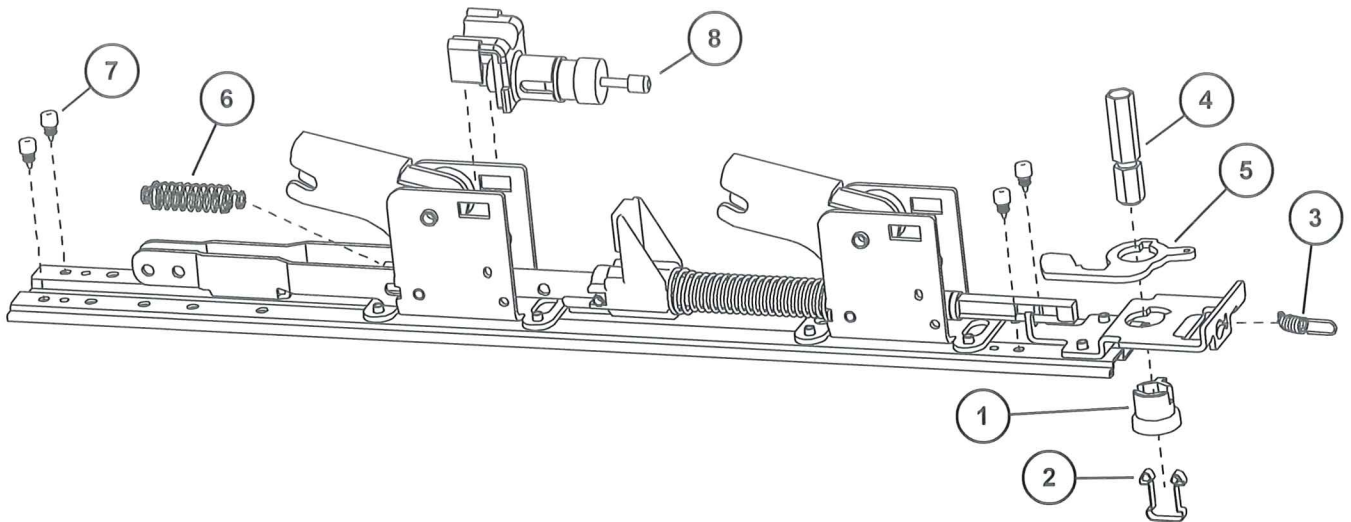
X in "Finish" column designates finished items; finish must be specified when ordering.

* To order, specify device type, size, and finish. Example: PBKIT 33A 3' US28

**Device mounting screws 900619 included.

33A/35A RIM PANIC DEVICE BASEPLATE ASSEMBLY

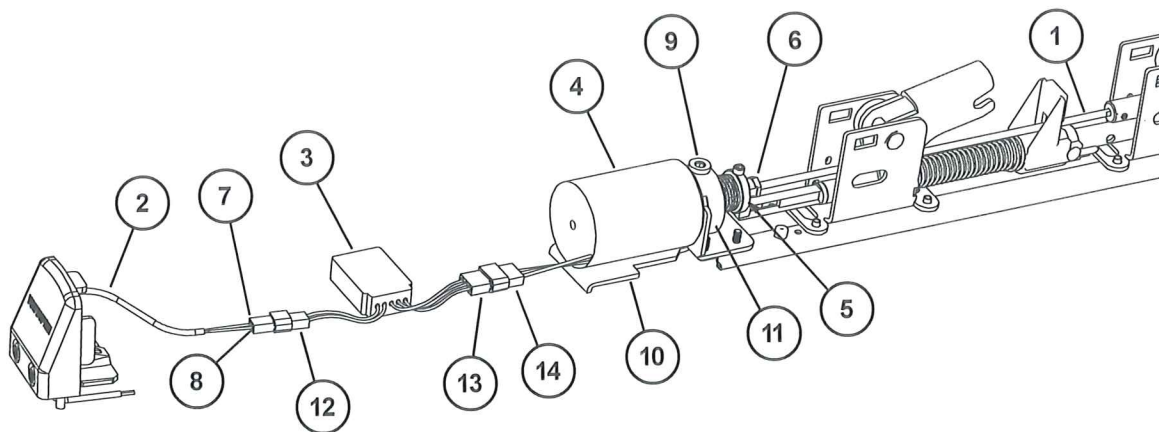
Item No.	Quantity	Part No.	Description	Finish
1	1	090043	Dogging adapter (Pkg of 2)	
2	1	090042	Dogging adapter spring (Pkg of 2)	
3	1	090041	Dogging spring (Pkg of 2)	
4	1	090040	Hex dogging shaft (Pkg of 2)	
5	1	090044	Dogging hook (Pkg of 2)	
6	1	090039	Latch return spring (Pkg of 10)	
7	4	090038	Rubber bumper (Pkg of 4)	
8	1	050491	Shock absorber	



HD-EL33A/HD-EL35A HEX DOGGING/ELECTRIC LATCH RETRACTION OPTION - PANIC DEVICE ONLY

Item No.	Quantity	Part No.	Description	Finish
1	1	050531	EL Dogging Rod Kit - 3' device	
1	1	050532	EL Dogging Rod Kit - 4' device	
2	1	110388	EL 6' Cable and Connector	
3	1	050534	EL Potted Module	
4	1	050536	HD-EL Solenoid	
5	1	050537	HD-EL Solenoid Plunger	
6	1	050538	EL Dogging Rod Retainer	
7	1	050539	EL Receptacle Connector - 2 Position	
8	2	050540	EL Female Terminal	
9	1	050541	HD-EL Dog Screw	
10	1	050542	HD-EL Solenoid Bracket	
11	1	050543	HD-EL Dogging Spring	
12	1	990599	EL Plug Connector - 2 Position	
13	1	990857	EL Receptacle Connector - 3 Position	
14	1	990858	EL Plug Connector - 3 Position	
*	1	050384	HD-EL Conversion Kit - 3'	
*	1	050385	HD-EL Conversion Kit - 4'	

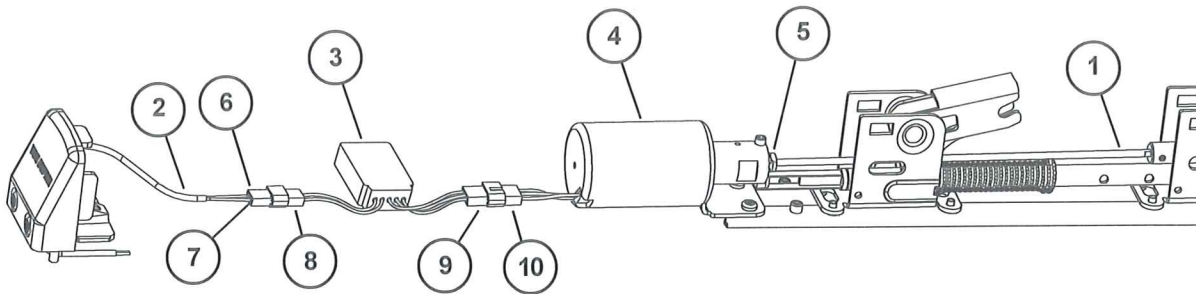
*Kit includes items 1-11 plus new control link, retaining ring, and baseplate screws.



EL33A/EL35A SERIES ELECTRIC LATCH RETRACTION OPTION

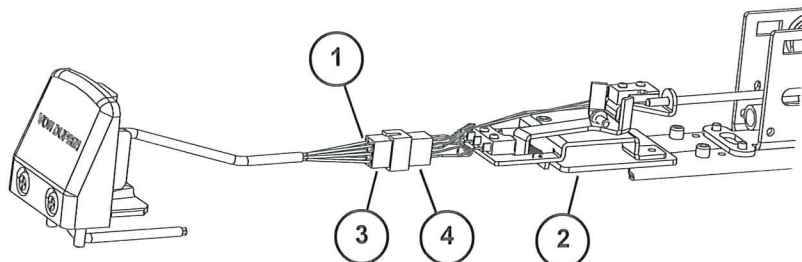
Item No.	Quantity	Part No.	Description	Finish
1	1	050531	EL Dogging Rod Kit - 3' device	
1	1	050532	EL Dogging Rod Kit - 4' device	
2	1	110388	EL 6' Cable and Connector	
3	1	050534	EL Potted Module	
4	1	050535	EL Solenoid Assembly	
5	1	050538	EL Dogging Rod Retainer	
6	1	050539	EL Receptacle Connector	
7	2	050540	EL Female Terminal	
8	1	990599	EL Plug Connector - 2 Position	
9	1	990857	EL Receptacle Connector - 3 Position	
10	1	990858	EL Plug Connector - 3 Position	
*	1	050070	EL Conversion Kit - 3'	
*	1	050078	EL Conversion Kit - 4'	

*Kit includes items 1-7 plus new control link pin, retaining ring, and baseplate screws.



SS33A/SS35A SERIES (SIGNAL SWITCH) OPTION

Item No.	Quantity	Part No.	Description	Finish
1	1	050544	SS Cable	
2	1	050545	SS Housing	
3	1	990601	SS Plug Connector - 6 Position	
4	1	990602	SS Receptacle Connector - 6 Position	

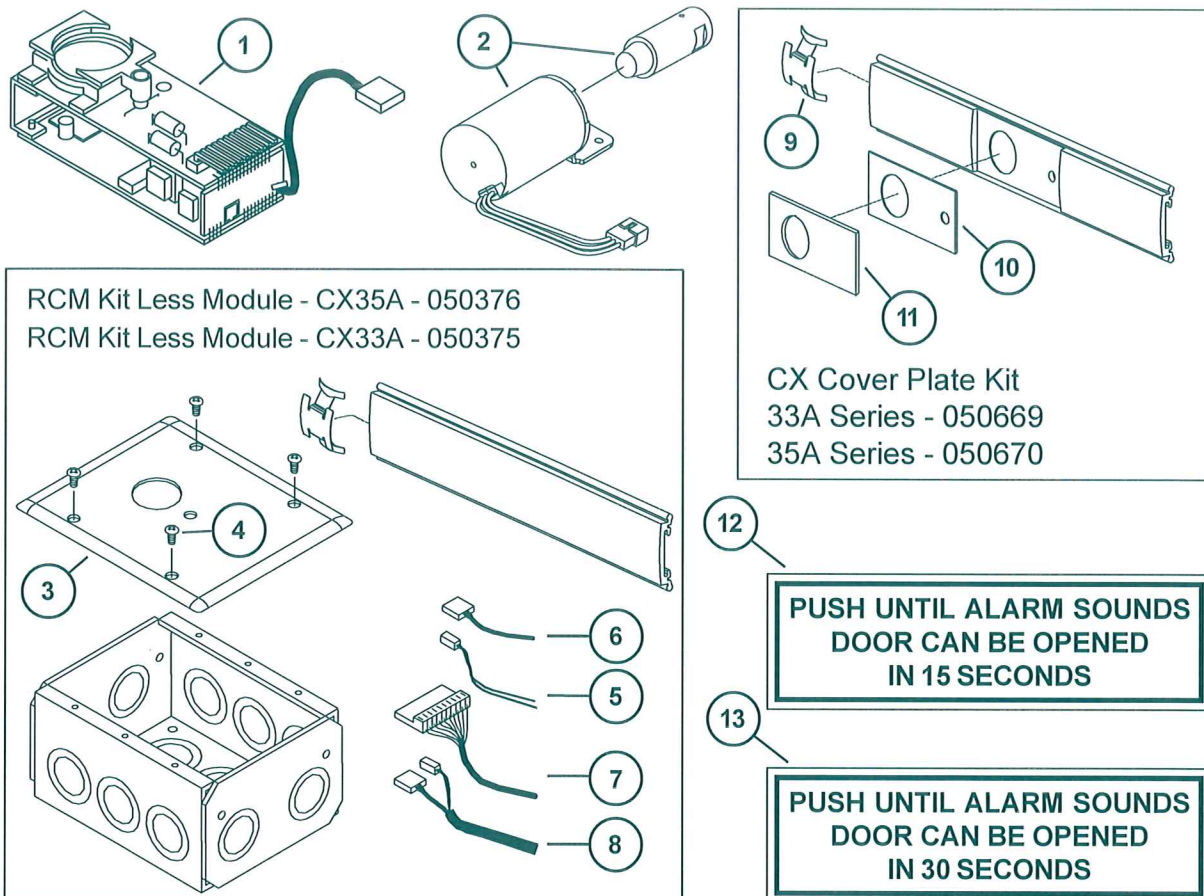


CX33A/35A SERIES CHEXIT AND CX-RCM OPTION

For discontinued Chexit devices made before August, 24 2015

Item No.	Quantity	Part No.	Description	Finish
1	1	050228	Chexit PCB Kit - 15 Second Release	
1*	1	050700	Chexit PCB Kit - 30 Second Release	
1	1	050701	Chexit PCB Kit - 0 Second Release	
1	1	050702	Chexit PCB Kit - Boca 15 Second Release	
1*	1	050703	Chexit PCB Kit - Boca 30 Second Release	
2	1	050533	CX Solenoid and Plunger	
3	1	113111	Faceplate and Adapter	X
4	4	963898	6-32 x 3/8" OPHMS Faceplate Screws	X
5	1	991338	RCM 2-Wire RX Cable	
6	1	991339	RCM 3-Wire Solenoid Cable	
7	1	112018	Chexit Wiring Assembly	
8	1	991336	CX-RCM Cable Assy - 5 Wire	
9	1	090036	Cover Plate Anti-rattle Spring (Pkg of 10)	
10	1	970513	LED Cover Mask - Chexit	
11	1	970519	LED Cover - Chexit	
12	1	113781	Sign 15 Second - Chexit	
13	1	113782	Sign 30 Second - Chexit	

*Over 15 second delay requires a letter of approval from the authority having local jurisdiction over the premises prior to the installation of the device. Allegion cannot grant such approval nor does it warrant local jurisdiction compliance.

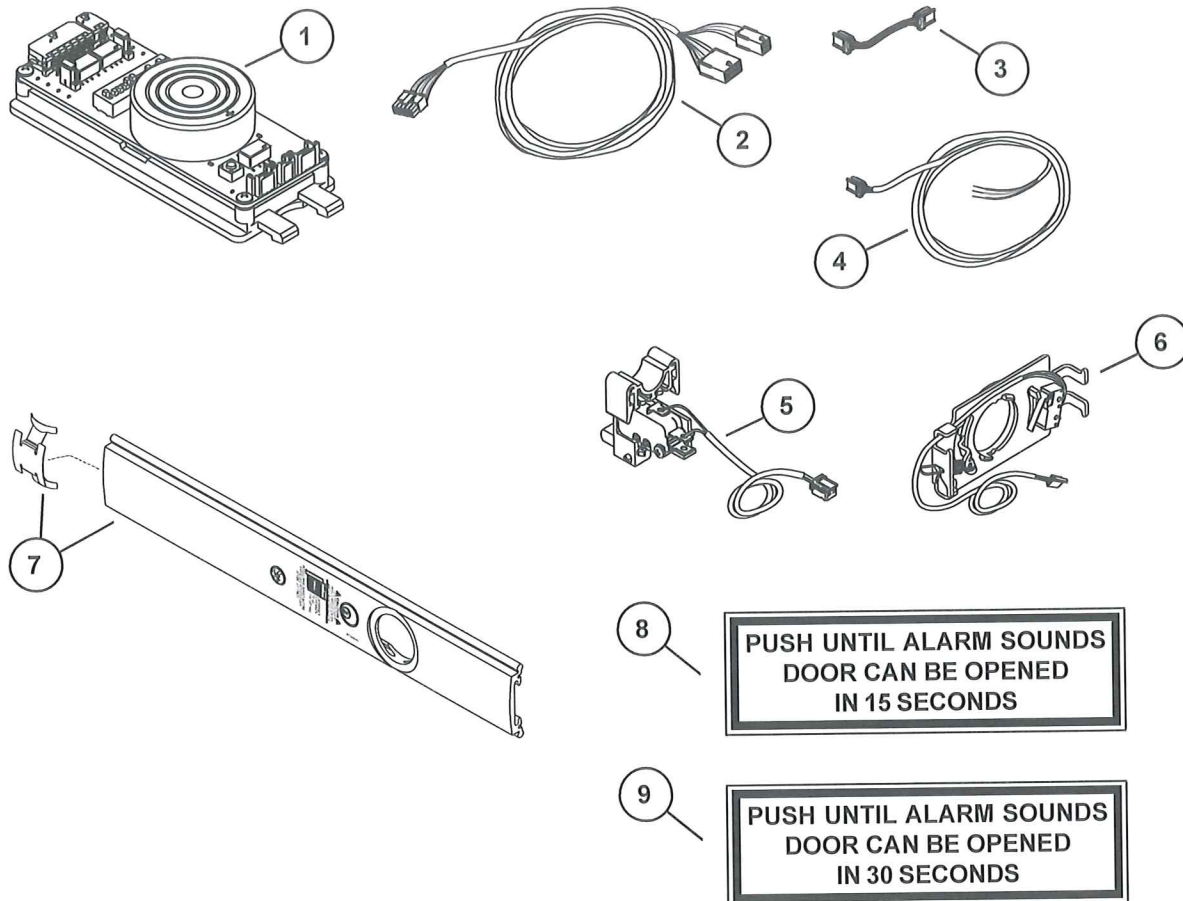


CX33A/35A SERIES CHEXIT

For new Chexit devices made after August, 24 2015

Item No.	Quantity	Part No.	Description	Finish
1	1	040086	Standard - 15 Second Release Delay	
1*	1	040087	Special Infinite Release Delay	
1*	1	040088	Special 30 Second Release Delay	
1	1	040089	Special 0 Second Release Delay	
1	1	040090	Special Mute 15 Second Release Delay	
1	1	040091	BOCA 15 Second Release Delay	
2	1	040191	CX Field Wiring Cable	
3	1	040192	CX Motor Cable	
4	1	040193	CX Trim Device Cable	
5	1	116717	CX RX Switch Assembly	
6	1	040170	CX Key Switch Assembly 3'	
6	1	040189	CX Key Switch Assembly 4'	
7	1	040093	CX33/99 Cover Plate Kit	X
7	1	040094	CX35/98 Cover Plate Kit	X
8	1	113781	Sign 15 Second	
9	1	113782	Sign 30 Second	

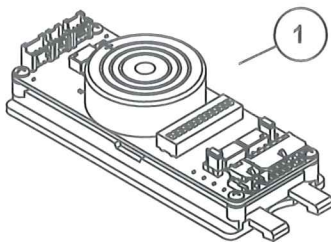
*Over 15 second delay requires a letter of approval from the authority having local jurisdiction over the premises prior to the installation of the device. Allegion cannot grant such approval nor does it warrant local jurisdiction compliance.



CX-RCM/DE5300 OPTIONS

For new RCM/DE5300 devices made after August, 24 2015

Item No.	Quantity	Part No.	Description	Finish
1	1	116711	Standard - 15 Second Release Delay	
2	1	040092	RCM Device Cable	
3	1	040188	DE5300/RCM Cable Kit	
4	1	040198	RCM Kit Less Module - CX33/99	X
4	1	040199	RCM Kit Less Module - CX35/98	X
5	1	040169	DE5300/RCM Key Switch Assy	
6	1	113781	Sign 15 Second	



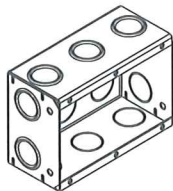
3 RCM/DE5300 Cable Kit



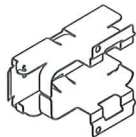
Field Wiring
Cable

Device Wiring
Cable

4 RCM Kit Less Module - CX33/99 - 040198 RCM Kit Less Module - CX35/98 - 040199



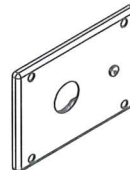
Control Box



Mounting
Bracket



Key Switch



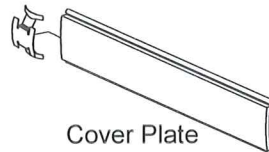
Faceplate



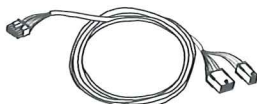
Field Wiring
Cable



Device Wiring
Cable



Cover Plate



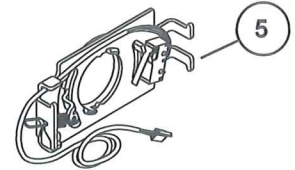
Door Wiring
Cable



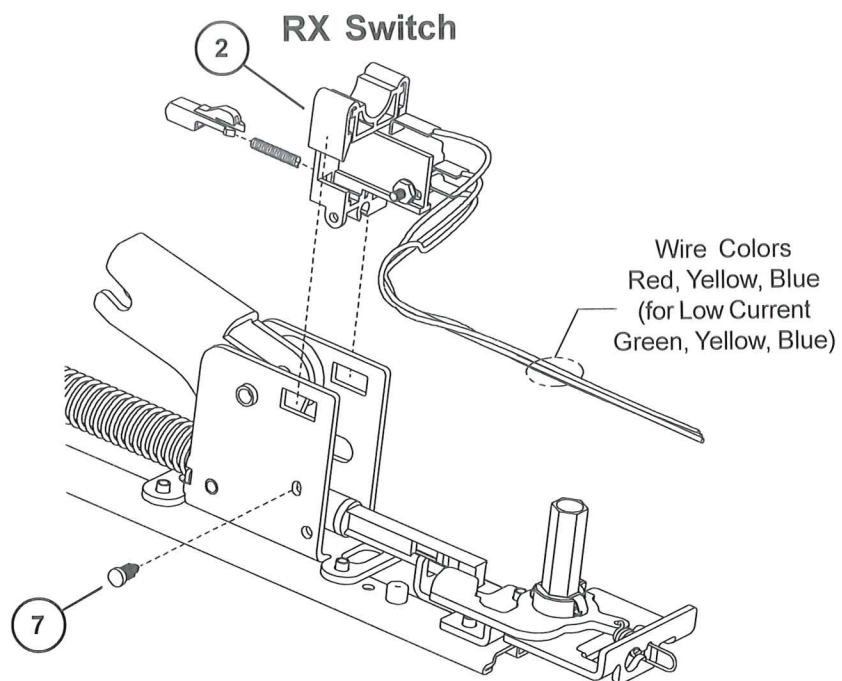
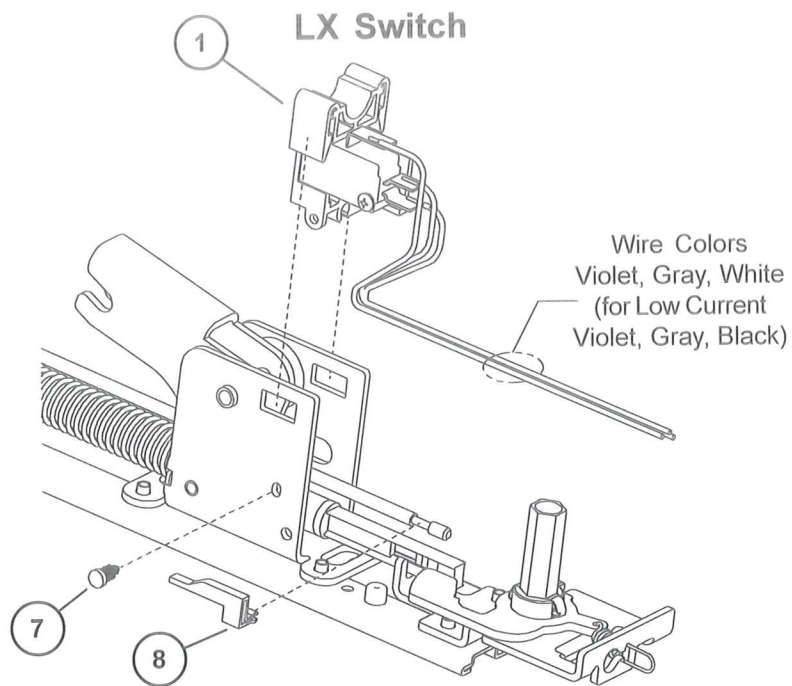
RCM Device
Cable

#6-32 X 3/8"
Faceplate Screws (4)

#6-32 X 1/4"
Mounting Bracket Screws (2)

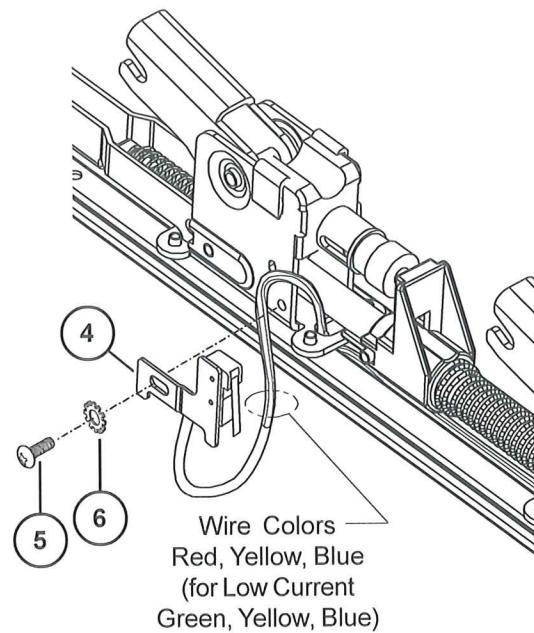
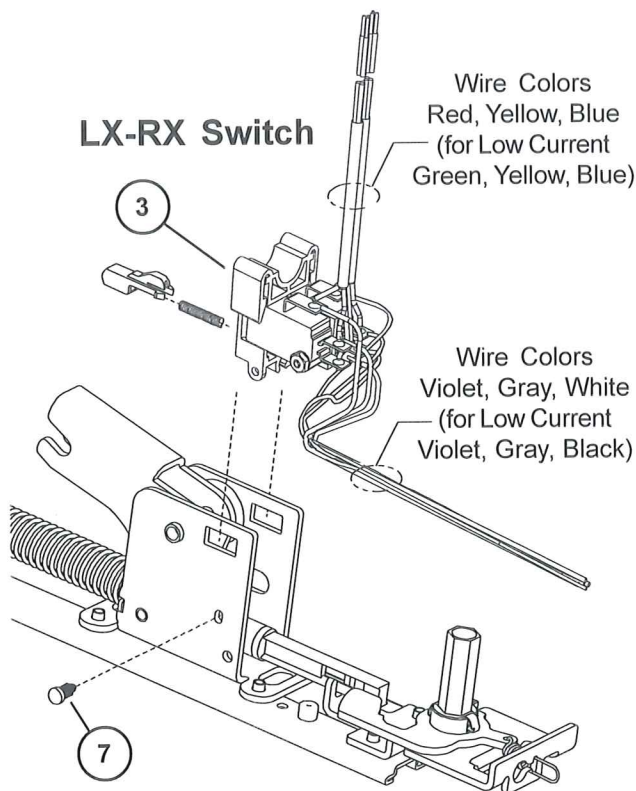


**PUSH UNTIL ALARM SOUNDS
DOOR CAN BE OPENED
IN 15 SECONDS**



33A/35A SERIES LX (LATCH BOLT MONITOR) & RX (REQUEST TO EXIT) OPTIONS

Item No.	Quantity	Part No.	Description	Finish
1	1	050254	LX Switch Kit 3' Device	
1	1	050255	LX Switch Kit 4' Device	
1	1	050247	LX-EL Switch Kit	
1	1	050283	LX-LC (Low Current) Switch Kit 3' Device	
1	1	050285	LX-LC (Low Current) Switch Kit 4' Device	
1	1	050287	LX-LC-EL (Low Current) Switch Kit	
2	1	050251	RX Switch Kit	
2	1	050281	RX-LC (Low Current) Switch Kit	
3	1	050256	LX-RX Switch Kit 3' Device	
3	1	050257	LX-RX Switch Kit 4' Device	
3	1	050259	LX-RX-EL Switch Kit	
3	1	050289	LX-RX-LC (Low Current) Sw. Kit 3' Device	
3	1	050291	LX-RX-LC (Low Current) Sw. Kit 4' Device	
3	1	050293	LX-RX-LC-EL (Low Current) Switch Kit	
2 & 4	1	050270	RX-2 Switch Kit	
4	1	050271	RX-AUX Switch Kit	
5	1	964558	8-32 x 5/16" PPHMS	
6	1	964019	#8 Washer	
7	1	090099	Pine Tree Clip (Pkg of 10)	
8	1	971091	LX Actuator	

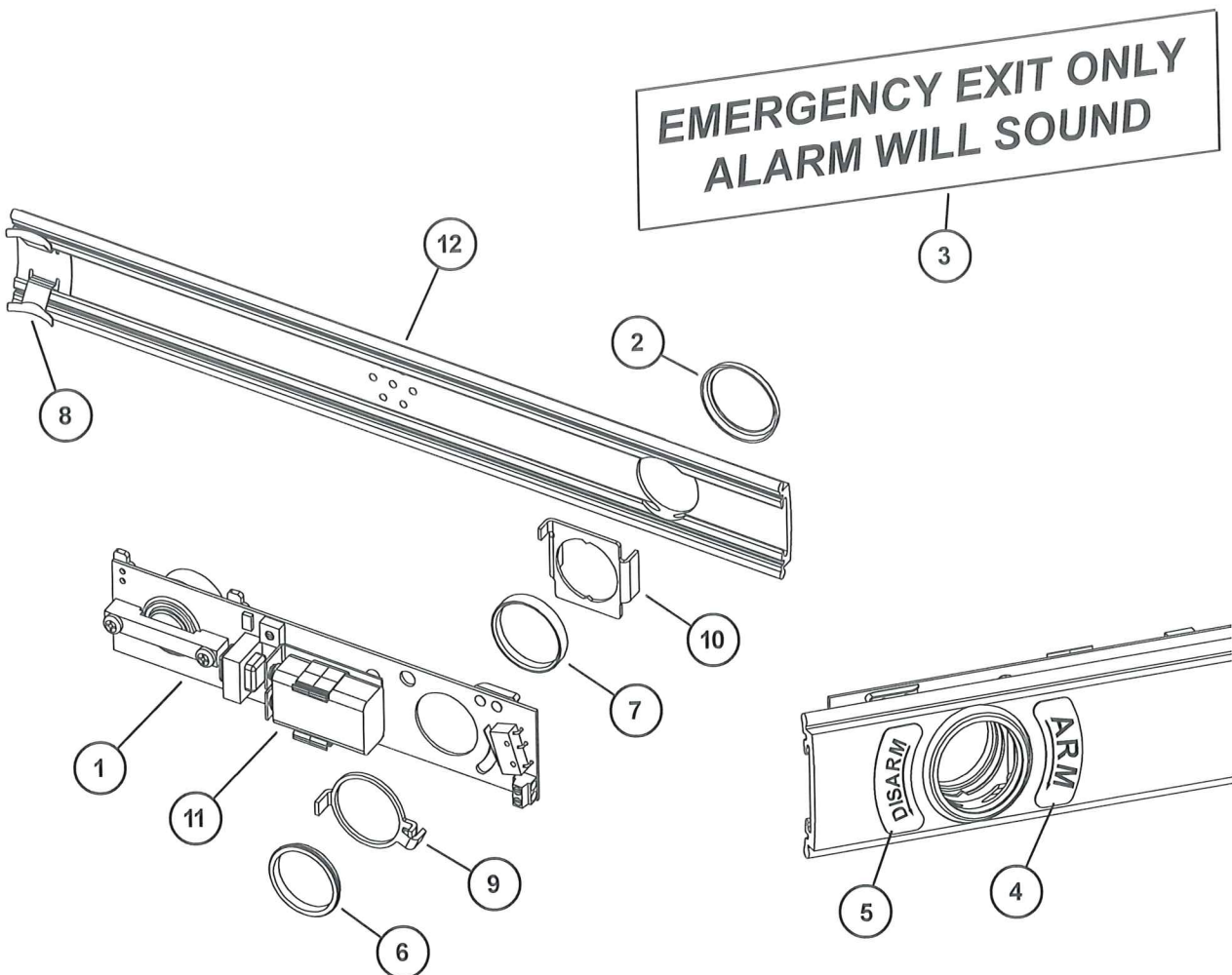


RX-AUX Switch

33A/35A ALK EXIT ALARM KIT

Item No.	Quantity	Part No.	Description	Finish
1	1	111795	ALK PCB Assembly	
2	1	050525	Cylinder Collar	X
3	1	969122	ALK Alarm Device Sign	
4	1	969349	ALK Arming Label	
5	1	969350	ALK Disarming Label	
6	1	969354	Retainer Nut	
7	1	970594	ALK Cylinder Spacer	
8	1	090036	Cover Plate Anti-rattle spring (Pkg of 10)	
9	1	971556	ALK Switch Actuator	
10	1	971557	ALK Cylinder Bracket	
11	1	990637	ALK Battery	
12	1	050406	33A Series ALK Cover Plate Kit	X
12	1	050407	35A Series ALK Cover Plate Kit	X

X in "Finish" column designates finished items; finish must be specified when ordering.



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About Allegion

Allegion (NYSE: ALLE) creates peace of mind by pioneering safety and security. As a \$2 billion provider of security solutions for homes and businesses, Allegion employs more than 8,000 people and sells products in more than 120 countries across the world. Allegion comprises 27 global brands, including strategic brands CISA®, Interflex®, LCN®, Schlage® and Von Duprin®.

For more, visit www.allegion.com.

aptiQ ■ LCN ■  ■ STEELCRAFT ■ VON DUPRIN

Schooner*

Varnishes

Classic High Gloss Varnish with UV Protection



PRODUCT DESCRIPTION

Schooner® combines the very best of classic varnish craftsmanship with the newest technology to create a high gloss finish with a traditional warm golden colour. It contains UV filters to screen the sun's damaging rays for remarkable durability.

- * Easy to apply
 - * Warm golden colour
 - * Excellent UV protection
- Schooner* has excellent water resistance, silky application and superior self-leveling properties.

PRODUCT INFORMATION

Colour	Y96
Finish	High Gloss
Specific Gravity	0.894
Volume Solids	53.40%
Typical Shelf Life	2 yrs
VOC (As Supplied)	420 g/l
Unit Size	1 US Pint 1 US Quart 1 US Gallon

DRYING/OVERCOATING INFORMATION

Drying						
	50°F (10°C)		73°F (23°C)		95°F (35°C)	
Touch Dry [ISO]	3 hrs		2 hrs		1 hrs	
Overcoating						
Substrate Temperature						
Overcoated By	50°F (10°C)		73°F (23°C)		95°F (35°C)	
	Min	Max	Min	Max	Min	Max
Schooner*	16 hrs	-	12 hrs	-	8 hrs	-
Note: Schooner* must be sanded between coats.						

Note: Schooner* must be sanded between coats.

APPLICATION AND USE

Preparation	<p>BARE WOOD Sand with 80 grade (grit) paper. Wipe with Brushing Liquid 333. Apply sealer coat of varnish reduced 10% with Brushing Liquid 333. PLYWOOD: Apply Inter-Prime Wood Sealer Clear 1026.</p> <p>PREVIOUSLY VARNISHED WOOD In Good Condition Sand surface with 120-150 grade (grit) paper and remove all dust. In Poor Condition If varnish is badly checked or peeling, remove finish to bare wood with Interstrip Semi-Paste 299E. Follow directions for varnishing bare wood.</p>
Method	<p>Pour the amount you expect to use in a separate container. Strain it through a paint strainer to ensure there is no contamination. Apply at least 5-6 coats on bare wood and a minimum of 3 coats on previously varnished surfaces until a satisfactory finish is obtained. Sand between coats using 220-320 grade (grit) paper. Remove sanding residue with a rag dampened with Brushing Liquid 333.</p>
Hints	<p>Mixing Do not shake. Stir gently.</p> <p>Thinner Brush - Brushing Liquid 333. Spray - Special Thinner 216.</p> <p>Cleaner Bare Wood - Brushing Liquid 333.</p> <p>Ventilation and Humidity Control It is best to paint on warm, dry mornings. Cold weather retards the drying and humidity can spoil the gloss. Calm, cool, low humidity days are ideal.</p> <p>Airless Spray Pressure: 170 bar/2500 psi. Tip Size: 0.33-0.41 mm/13-16 thou.</p> <p>Conventional Spray Pressure Pot: Pressure: 3.44-4.47 bar/50-65 psi (gun pressure); 8-10 psi (pot pressure). Tip Size: 0.89-1.4 mm/35-50 thou. Siphon Cup: Pressure: 3.44-4.47 bar/50-65 psi - gun pressure. Tip Size: 1.5-1.8 mm/60-70 thou.</p> <p>Brush Always use a clean brush that is kept specifically for varnishing. Clean brushes before use.</p> <p>Roller If rolling, use a thin nap roller and "tip-off" with a clean natural bristle brush.</p> <p>Other Spray pressures listed are recommendations only. The applicator may use any settings which yield the best results for the individual spraying technique and current weather conditions. To enhance appearance of the bare wood and fill porous open grain, apply Interstain according to label directions and allow to dry overnight.</p>

Please refer to your local representative or visit www.yachtpaint.com for further information.

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Ref:3222 Issue Date:6/8/2010



Schooner* Varnishes

Classic High Gloss Varnish with UV Protection



Some Important Points

Never leave bare wood exposed for long periods of time as it will absorb moisture. Avoid using Schooner* straight from the can as this will cause it to age prematurely and may introduce contamination to the can. Failure to follow proper dry times carefully will cause improper drying, wrinkling and loss of adhesion. Avoid painting in direct sunlight. Product temperature should be minimum 10°C/50°F and maximum 29°C/85°F. Ambient temperature should be minimum 10°C/50°F and maximum 35°C/95°F. Substrate temperature should be minimum 10°C/50°F and maximum 29°C/85°F.

Compatibility/Substrates

Apply to clean, dry, properly prepared surfaces only. Schooner* can be applied over any varnish as long as it is adhered well and has been cleaned and sanded. Do not apply two part varnishes over Schooner*.

Number of Coats

At least 5-6 coats Bare Wood: Thin first coat 10%

Coverage

(Theoretical) - 600 ft²/gal by brush, 480 (ft²/Gal) by spray

Recommended DFT

2 mils dry

Application Methods

Airless Spray, Brush, Conventional Spray, Roller- Pressure Pot or Siphon Cup

TRANSPORTATION, STORAGE AND SAFETY INFORMATION

Storage

TRANSPORTATION:

Schooner* should be kept in securely closed containers during transport and storage.

STORAGE:

Exposure to air and extremes of temperature should be avoided. For the full shelf life of Schooner* to be realised ensure that between use the container is firmly closed and the temperature is between 5°C/40°F and 35°C/95°F. Keep out of direct sunlight.

Safety

DISPOSAL: Do not discard tins or pour paint into water courses, use the facilities provided. It is best to allow paints to harden before disposal.


Remainders of Schooner* cannot be disposed of through the municipal waste route or dumped without permit. Disposal of remainders must be arranged for in consultation with the authorities.

GENERAL: Read the label safety section for Health and Safety Information, also available from our Technical Help Line.

IMPORTANT NOTES

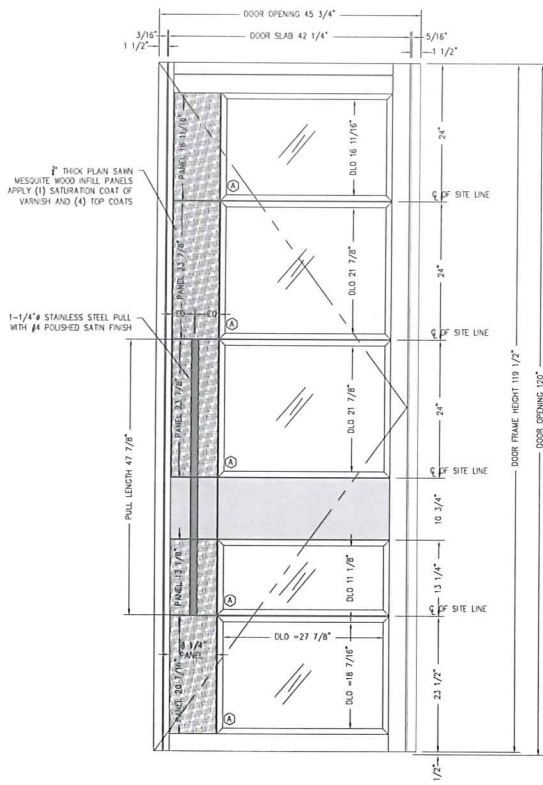
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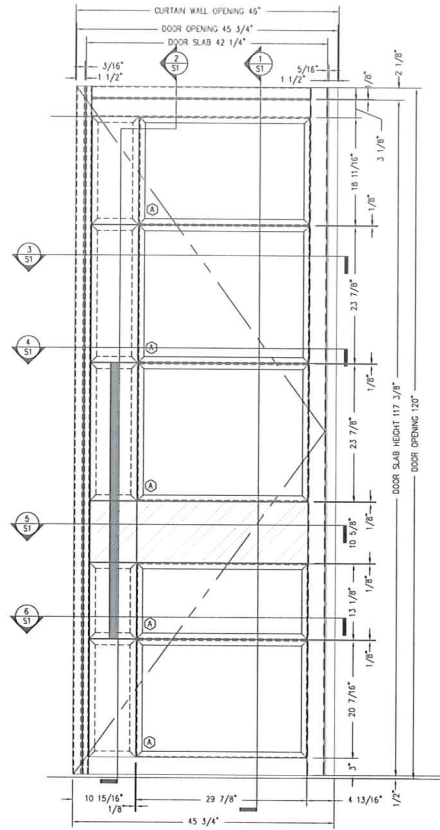
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1 DOOR SLAB "A" RH SHOWN
FINISHED ELEVATION
N.T.S.



2 DOOR SLAB "A" RH SHOWN
FRAMING ELEVATION
N.T.S.

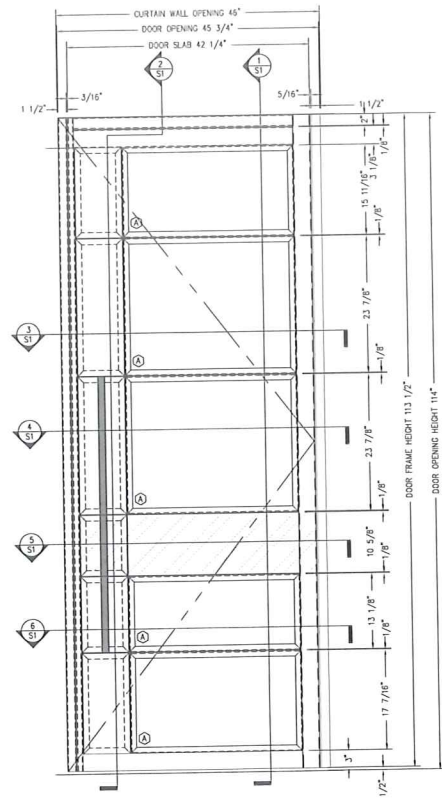


AMERICAN PRODUCTS, INC. (API)
12157 W. LINEAUGH AVENUE #335
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AMERICAN PRODUCTS, INC.
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WWW.AMERICANPROD.COM



Customer: FLORIDA GLASS OF TAMPA BAY
Assembly: NEW CENTRAL LIBRARY (AUSTIN, TX)
Drawn By: SCC
Date: 02/12/2016
Revision:
Scale: NTS
Sheet: E1

API Recommends that this note appear on all section elevations and section view details in your blueprints.
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Architect: API (813)925-0144



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AAADM

American Association of Automatic Door Manufacturers

Low Energy Power Operated Doors

OWNER'S MANUAL

Distributed by:



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CAUTION

An Improperly Adjusted Door can cause injury and/or equipment damage.

Inspect door operation daily using safety checklist in Owner's Manual and at the door.

Have door adjusted as described in Owner's Manual.

Safety devices should be in place and operational.

Have door inspected at least annually by an AAADM certified inspector.

In the following manual, the word:

Caution - means that injury or property damage can result from failure to follow instructions.

Note - is used to indicate important steps to be followed or important differences in equipment.

To Our Customers

The purpose of this manual is to familiarize you with your automatic door system. It is essential that you "know your system" and that you recognize the importance of maintaining your door system in compliance with the industry standards for safety.

It is your responsibility, as owner or caretaker of the equipment, to inspect the operation of your door system on a daily basis to ensure that it is safe for use by your invitees, customers, or employees.

This manual will provide you with a description of the operation and maintenance requirements of your door. It also provides the instructions for the *Daily Safety Check*.

Should the door fail to operate as described in the *Daily Safety Check*, or at any other time for any other reason, **do not attempt to repair or adjust the door**. Call an AAADM Certified service technician. These technicians are trained to service your door in accordance with applicable industry safety standards.

Service Availability

Automatic door products are distributed through a nationwide network of authorized automatic door suppliers for sales, installation, and service.

Should you need service on your door system, consult the respective door manufacturer or its authorized representative.

Compliance with Safety Standards

Your door system was designed to the latest operating and safety standards. In order to ensure the continued safe operation of your door, it is important that:

- Your door system be maintained in compliance with the standards of the industry.
- Proper decals and labels be applied and maintained on your doors. If decals are removed or cannot be read, request labels to be replaced when calling for service.
- All doors should be checked by an AAADM certified inspector at least annually.

AAADM, the American Association of Automatic Door Manufacturers, has established a program to certify automatic door inspectors. Through this program, the inspectors are trained to check your door systems for compliance with the appropriate version of the American National Standards Institute standard ANSI/BHMA A156.19.

What You Should Know

Be sure that an automatic door supplier has provided the following for each door:

1. Instruction on how to conduct the *Daily Safety Check** (by walk-through example).
2. Location of function switches and instruction in their use.
3. Circuit breaker or main power disconnect location for each door system.
4. AAADM inspection form or a work order signed by an AAADM certified inspector.
5. A completed Annual Compliance Inspection label located at the bottom of the Safety Information label affixed to the door.
6. Warranty information for each door.
7. Number to call for service or questions about your system if you are uncertain of any condition or situation.

Note: If there are any problems, or if you are unsure about the safe performance of the door, **discontinue door operation immediately and secure in a safe manner.** Call your authorized automatic door professional for repairs.

Note: AAADM Daily Safety Check videos are available. Contact an automatic door supplier or AAADM.

Daily Safety Check

Perform the following safety checks *daily* on each automatic swinging door to ensure your customers' safety and your own protection. Verify the following requirements while traffic is restricted.

1. Activate the door. Door should open at a slow smooth pace (4 seconds or more) and stop without impact.
2. Door must remain fully open for a minimum of 5 seconds before beginning to close.
3. Door should close at a slow smooth pace (4 seconds or more) and stop without impact.
4. Inspect the floor area. It should be clean with no loose parts that might cause user to trip or fall. Keep traffic path clear.
5. Inspect door's overall condition. The appropriate signage should be present and the hardware should be in good condition.
6. Have door inspected by an AAADM certified inspector at least annually.

IF YOU HAVE A PROBLEM, TURN OFF THE DOOR OPERATING EQUIPMENT AND CALL YOUR AUTOMATIC DOOR SUPPLIER.

General Safety

Pay attention to the following general safety items and perform checks periodically where noted.

1. Force - Force to prevent the door from closing should not exceed 15 pounds. This can be measured with a force gauge.
2. Breakout Stop - Center pivoted in-swinging doors may be supplied with an emergency breakout stop or switch that will allow the door to open in the direction of emergency egress. Call your supplier for details.

When the door is pushed into the breakout mode, check that door will not activate.

3. Signage - Doors shall be equipped with (a) decal(s) visible from either side, instructing the user as to the operation and function of the door. The decal shall be mounted 50 inches, +/- 12 inches, from the floor to the centerline of the decal. The letters shall be 5/8 inch high minimum.



Figure 1

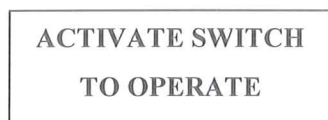


Figure 2

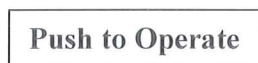


Figure 3

- A. All low energy doors shall be marked with a sign, visible from both sides of the door, with the words "Automatic Caution Door." See Figure 1. The sign shall be a minimum of 6 inches in diameter and with minimum 5/8 inch tall black lettering on a yellow background. Additional information may be included.
- B. When a separate wall switch is used to initiate the operation of the door operator, the door shall be provided with decals on both sides of the door with the message "Activate Switch to Operate" or the side with the knowing act switch if there is only one. Letters white and background blue. See Figure 2.
- C. When door motion is used to initiate the door operation, the doors shall be provided with the message "Push to Operate" on the push side of the door and "Pull to Operate" on the pull side of the door. Letters white and background blue. See Figure 3

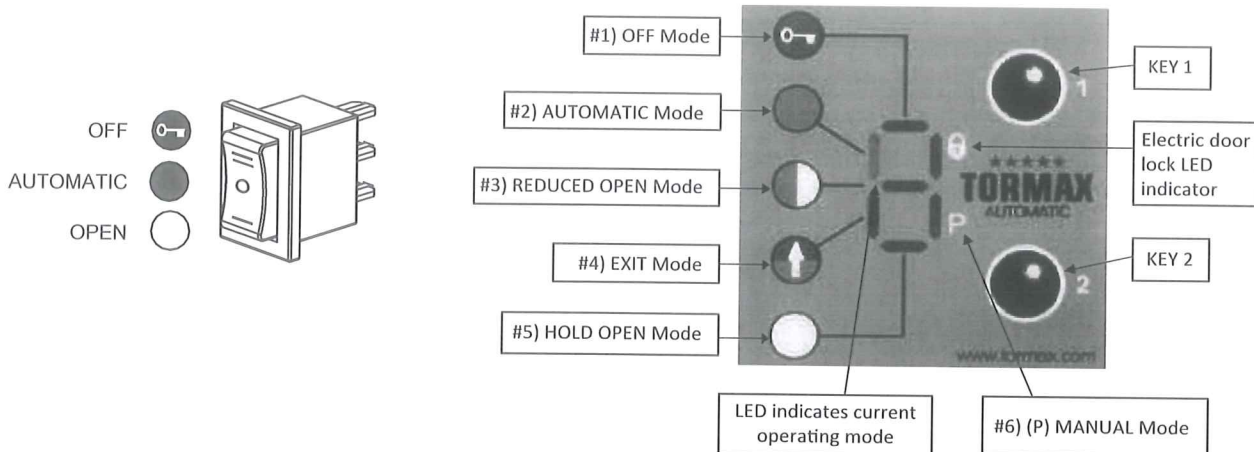
4. Lock Stile - With door open, grasp lock stile of door and attempt to move vertically and horizontally. There should be no looseness in the door pivots or in connections between door and operator.
5. Housekeeping - Check the door area for tripping or slipping hazards.
6. Check all door panels for damage.

Make sure that all hardware and overhead covers are properly secured. There should be no bulletin boards, literature racks, merchandise displays, or other attractions in the door area that would interfere with use of the door or invite people to stop or stand in the door area.

IF YOU HAVE A PROBLEM, TURN OFF THE DOOR OPERATING EQUIPMENT AND CALL YOUR AUTOMATIC DOOR SUPPLIER TO MAKE PROMPT REPAIRS.

Modes of Door Operation

Modes of operation can be selected with the 6 position Functional Control Panel (FCP). The technician will review the appropriate mode switch with the end-user.



1. **OFF** - The interior and exterior activators are inhibited after the door reached the fully closed position, if an electric lock is present it will be activated. Door will cycle open, if a signal is sent to the key switch input.



2. **AUTOMATIC** - Typical setting for normal 2-way traffic operation with interior and exterior activators, key switch input and safety devices operating the door.



3. **REDUCED OPERATING** - Allows the door to open with a reduced opening width. Activators and safety devices operate the same as automatic mode.



4. **EXIT** - (1-way traffic) Allows interior activator and key switch inputs to operate the door. The exterior activator input is inhibited from opening the door while the door is closed. When the door is opened/ closing the exterior activator becomes operational and will re-open a closing door.



5. **HOLD OPEN** - Hold and maintains the door in the open position.



6. **(P) MANUAL OPERATION** - Allows the door to be used manually without the use of sensors. Push and pull motion applied to the door to open and close the door.

Troubleshooting Chart

For iMotion 1301, 1302 and TN110/ 1401 Swing doors only, FCP will display (E) Error or (H) Hint codes followed by 2 numbers. Refer to the chart below for troubleshooting.

* No.	Fault	Reaction of System	Reset
E00	Firmware incompatible to MCU version /D	Safety operating mode or only display	Reset, new version MCU32-BASE
E0x	Internal test negative	Safety operating mode or only display	Reset
E21	LIN to User Interface 1 USIN-7 interrupted	Last mode of operation remains	Automatically if OK
E22	LIN to User Interface 2 USIN-7 interrupted	Last mode of operation remains	Automatically if OK
E23	LIN to s I/O-Modul 1 INOU interrupted	Programmed function will be inactive	Automatically if OK
E24	LIN to s I/O-Modul 2 INOU interrupted	Programmed function will be inactive	Automatically if OK
E25	LIN to Lock Unit 1 LOCUC-40-7 interrupted	Last status remains	Automatically if OK
E26	LIN to Lock Unit 2 LOCUC-40-7 interrupted	Last status remains	Automatically if OK
E30	Safety clos. creep 2 >1min. active, test neg.	According safety function	Automatically if OK
E31	Safety open 1 >1min. active, test neg.	According safety function	Automatically if OK
E32	Safety op. creep 1 >1min. active, test neg.	According safety function	Automatically if OK
E33	Safety closing 1 >1min. active, test neg.	According safety function	Automatically if OK
E34	Safety clos. creep 1 >1min. active, test neg.	According safety function	Automatically if OK
E35	Safety swing area >1min. active, test neg.	According safety function	Automatically if OK
E36	Safety stop >1min. active, test neg.	According safety function	Automatically if OK
E37	Safety open 2 >1min. active, test neg.	According safety function	Automatically if OK
E38	Safety op. creep 2 >1min. active, test neg.	According safety function	Automatically if OK
E39	Safety closing 2 >1min. active, test neg.	According safety function	Automatically if OK
E41	Activator inside > 1min. active	Door remains open	Automatically if O.K.
E42	Activator outside > 1min. active	Door remains open	Automatically if O.K.
E43	Key switch > 1min. active	Door remains open	Automatically if O.K.
E46	Emergency open >10min. active	Door remains open	Automatically if O.K.
E47	Emergency close >10min. active	Door closes and remains closed	Automatically if O.K.
E48	Wake up or Push button SW2 > 1min. active	Door remains open	Automatically if O.K.
E49	Inhibit switch > 1min. active	Door stand still	Automatically if O.K.
E51	Encoder not working	Safety operating mode	Automatic Reset / Reset
E52	Potentiometer not working	Safety operating mode	Reset / Replace potentiometer
E54	Driveway in op. longer than reference	Safety operating mode	Reset >automatic configuration
E55	Position in closed position is drift to much		Reset
E61	Power supply 40V (Limit U,I,P)	Safety operating mode	Automatically if O.K.
E62	Power supply 24V (Limit U)	Safety op. mode	Automatic if OK.
E64	Motor temp. > 90 ° C, cable interrupted	Safety operating mode	Automatically after cooling down
E65	Control end stage > 100 ° C	Safety operating mode	Automatically after cooling down
E66	Motor current differs from given value	Safety operating mode	Reset
E67	Motor current to high in long-term	Normal operation	Automatically if o.k.
E8x	Memory or processor test negative	Safety operating mode	Reset
H11	Operator type not defined	Safety operating mode	Program operator type
H12	Door mass not defined	Safety operating mode	Program door mass
H13	Linkage type not defined	Safety operating mode	Configuration 09x and 090
H14	Automatic configuration not executed	Safety operating mode	Program 021 or 022
H18	Configuration error in trajectory	Safety operating mode	Configuration
H21	Teach-In: Door moves >15s before start	Abort Teach-In	New Teach-In
H22	Teach-In: No start within 15s	Abort Tech-In	New Teach-In
H23	Teach-In: Opening movement >15s	Abort Tech-In	New Teach-In
H24	Teach-In: Hold open time >60s	Abort Tech-In	New Teach-In
H25	Teach-In: Closing movement >15s	Abort Tech-In	New Teach-In
H26	Teach-In: Wrong direction at closing	Abort Tech-In	New Teach-In
H27	Teach-In: Differing close position	Abort Tech-In	New Teach-In
H62	Calibration run in closing direction	Searches closed position	At the end of movement
H63	Reference run opening	Measures reference run length	At the end of movement
H64	Reference run closing	Searches closed position	At the end of movement
H66	Learn mode (Force detection)	Normal operation	After 3-30 opening cycles
H71	Battery mode	Door moves slowly	Power supply return
H73	Motor current in closed position to high	Normal operation	Reset
H91	Obstacle detection at opening	Door reverses	Automatically, Display 20s.
H92	Obstacle detected at closing	Door reverses	Automatically, Display 20s.
H93	Obstacle at same position at opening	Reset after 5 reversings	Automatically, Display 20s.
H94	Obstacle at same position closing	Reset after 5 reversings	Automatically, Display 20s

Troubleshooting Chart

For 1102/ 1201 Swing doors only, FCP will display (E) Error or (H) Hint codes followed by 2 numbers. Refer to the chart below for troubleshooting.

* No.	Fault	Reaction of System	Reset
E0x	Internal test negative. Fatal error.	Safety operating	Power OFF-ON. Then press button 5s
E23	CAN connection EDM interrupted	Safety operating mode	
E24	CAN connection PDM interrupted	Safety operating mode	
E25	CAN connection MDM interrupted	Safety operating mode	
E26	CAN connection to 2. door interrupted	Primary continues, second. stays closed	
E31	Safety open > 1 min. active, test neg.	According safety function	Automatically if OK
E32	Safety closing > 1 min. active, test neg.	According safety function	Automatically if OK
E33	Safety stop > 1 min. active, test neg.	According safety function	Automatically if OK
E34	Safety swing area > 1 min. active, test neg.	According safety function	Automatically if OK
E35	Safety open creep > 1 min. active, test neg.	According safety function	Automatically if OK
E36	Safety close creep > 1 min. active, test neg.	According safety function	Automatically if OK
E37	Safety open Low En. > 1min. active, test neg.	According safety function	Automatically if OK
E38	Safety clos. Low En. > 1min. active, test neg.	According safety function	Automatically if OK
E41	Activator inside > 1min. active	Door remains open	Automatically if OK
E42	Activator outside > 1min. active	Door remains open	Automatically if OK
E43	Key switch > 1min. active	Door remains open	Automatically if OK
E45	Emergency open > 1 min. active	Door remains open	Automatically if OK
E46	Emergency close > 1 min. active	Door closes and remains closed	Automatically if OK.
E47	Inhibit switch > 1 min. active	Door closes without hold open time	Automatically if OK.
E48	Activator bed passage > 1min. active	Door remains open	Automatically if OK
E61	Power supply 40V outside of admissible range	Safety operating mode	Automatically if OK
E62	Power Supply 24V outside of permissible range	Safety op. mode	Automatically if OK
E63	Power Supply 24V short circuit	Safety op. mode	Automatically after 20s if OK
E64	Motor hot	Safety operating mode	Automatically after cooling down
E66	Motor faulty. Interruption of motor control.	Safety operating mode. No braking!	Replace motor
E68	Power failure (Power on)	-	-
E99	Error at secondary drive unit		
H01	System was started		
H11	Parameter 06... not yet programmed	Safety operation	Enter parameter
H12	Parameter 07... not yet programmed	Safety operation	Enter parameter
H13	Parameter 08... not yet programmed	Safety operation	Enter parameter
H14	Commissioning not executed	Safety operation	Start commissioning
H15	Timeout moving. Door blocked. Motor faulty	Commissioning is canceled	Restart commissioning
H16	Mass detection faulty (wind, opening angle)	Autom. detection is terminated	Restart automatic detection
H17	Open endstop too soft. Motor may overheat	-	
H18	Safety function is used more than once		
H19	Detection of safety functions pending		See P60x, P64x, P65x
H21	Teach-In: Door moves >25s before start	Abort Teach-In	P023 or OB code 3
H22	Teach-In: No start within 60s	Abort Teach-In	New Teach-In
H23	Teach-In: Movement too slow. >60s	Abort Teach-In	New Teach-In
H31	Obstacle detection at opening	Door reverses	Automatically, Display 20s.
H32	Obstacle detected at closing	Door reverses	Automatically, Display 20s.
H33	Permanent obstacle at opening	Safety operation	Reset
H34	Permanent obstacle at closing	Safety operation	Reset
H62	Calibration run in closing direction	Searches closed position	At the end of movement
H67	Absolute position not found yet	Slow opening movement	
H74	Motor current in open position too high	E64 can trigger later	P404. Avoid wind load. Install HM